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SETTLEMENT REPORT

OF THE

DISTRICT OF MOOZUFFERNUGGER,

INCLUDING

A REPORT ON THE PERMANENT SETTLEMENT OF THE WESTERN
PERGUNNAHS OF THE DISTRICT.

Published by Authority.

ALLAHABAD:

PRINTED AT THE NORTH-WESTERN PROVINCES' GOVERNMENT PRESS.

1873.



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REVIEW

OF THE

MOOZUFFERNUGGUR SETTLEMENT REPORT.

No. OF 1873.

FROM

A. COLVIN, ESQUIRE,

Secy. to the Board of Revenue, N.-W. Provinces,

TO

C. A. ELLIOTT, ESQUIRE,

Secretary to Government, N.-W. Provinces.

DATED ALLAHABAD, THE 12TH DECEMBER, 1873.

SETTLEMENT DEPARTMENT.

SIR,

Present :
MR. J. INGLIS, C.S.I.,
and
MR. R. D. ESQUIRE.

* Bugrah.
Shikarpore.
Boorhanah.
Churtawul.
Thannah Bhowan.
Jhinjanah.
Bedowlee.
Kandiah.
Kyranah.
Shamlee.

† Khutowlee.
Bhooma Sumbhau-
hera.
Bhokurheeree.
Poor Chuppar.
Mooznuffernuggur.
Jansuth.
Goordhanpore.

I AM directed by the Board of Revenue to submit, for His Honor's information and orders, the Report on the Moozuffernuggur Settlement, with a review of the results in the ten * pergunnahs marginally noted. The remaining pergunnahs, † the re-settlement of which as effected in 1863-64 has been cancelled, and of which the re-assessment under Mr. Cadell is now in progress, will not be noticed in this review. Government in G. O.

No. 2158A., dated 5th December, 1872, suggested that the Settlement of a portion of the Gordhunpore Pergunnah should be considered with that of the western half of the district, and should come up with it for confirmation. But the Board propose to instruct Mr. Cadell to report on Gordhunpore with the other pergunnahs now under revision. It is quite distinct from the western portion of Mozuffernuggur and the statistics of former and present Settlement should be reviewed by Mr. Cadell before they are taken up by the Board. This review Mr. Cadell can incorporate in his report on the rest of the Eastern Pergunnahs.

2. The arrangement of the Volume of Reports, printed some years since, is confusing. But the Index now affixed to it will show the page at which the reports of the several officers will be found, with the nature of the contents of each paper. It is too late now to recast the volume. It commences with the Commissioner's review, forwarding to Government Mr. Martin's final report of the completion of the work. Some previous enquiries made by Mr. Martin regarding the mode of introducing a Permanent Settlement follow, and immediately after these, at page 33, is Mr. Martin's final completion report. Then follow pergunnah reports; the report of Mr. Keene, the Collector who preceded Mr. Martin, on the result of his share of the work being printed at page 87. At 117 will be found correspondence between the Collector and the higher authorities on the exceptional cases of two Pergunnahs, Bedowlee and Gordhunpore; and at page 128 a Memorandum by the Assistant Settlement Officer on the expediency of making the Settlement of Bedowlee permanent. Finally, there have now been printed and attached to the volume Mr. Cadell's papers on the Permanent Settlement of the pergunnahs under review.

Arrangement of Reports.

3. The Settlement of Moozuffernuggur lapsed in 1861: and in April, 1860, Mr. Keene was appointed Collector of the District, and charged with the completion of a new Settlement. Mr. A. Colvin and Rai Nanuck Chund were attached to the District as Assistant and Deputy Collectors respectively in the Settlement Department. The summer of 1860 was spent in preparing for the measurements to take place in the ensuing cold season. These were carried on during the following three years, and completed in the cold weather of 1862-63. In March, 1862, Mr. Keene went to England

Officers concerned in work.

on furlough, leaving much of the measurements and assessments completed, and made over charge of the District to Mr. Martin. In May, 1862, Mr. Charles Grant was appointed as a second Assistant Collector in the Settlement Department, and Mirza Vicar Ally Beg, a second Deputy Collector. Mr. Grant was transferred to Meerut in March, 1863, and Mr. Colvin to Bijnaour in January, 1864. The work subsequent to that date was carried on singly by Mr. Martin, with the aid of the Deputy Collectors. It consisted in arranging for the introduction of a Permanent Settlement under the orders of 1867, and in completing the Settlement records. The Commissioner's final report was received by the Board in January, 1867. In 1868, Sir William Muir re-opened the question of the assessments, cancelled the entire work done by Mr. Charles Grant, and most of Mr. Martin's, and instructed Mr. Cadell (recently appointed to the district, with a view of concluding operations necessary to the introduction of a Permanent Settlement) to revise the assessments of the seven pergunnahs

Khatowlee.
Jansuth.
Bhooma Sumbhulhera.
Poor Chupar.
Moozuffernuggur.
Gordhunpore.
Bokurherea.

marginally noted. This work is still in progress, and Government having recently expressed a wish that the Board's review of the Settlement remainder of the district should not await Mr. Cadell's report on the result of his revisions, the Board submit the required review.

4. The District of Moozuffernuggur lies between latitude $29^{\circ} 10' - 29^{\circ} 50'$, longitude $77^{\circ} 6' - 78^{\circ} 10'$. It covers an area of 1,646 square miles, and contains 1,044 villages and 1,122 estates. The population numbered 690,082 by the census of 1872, or 415.9 to the square mile, of whom 498,950 are Hindoos and 191,132 Mahomedans—251,971 agricultural, and 438,111 non-agricultural. In 1865 the population was returned at 682,212. The district is bounded on the north by Saharunpore, on the south by Meerut, the Ganges and Jumna severally flanking it on east and west. The Ganges and Jumna Canals traverse it from north to south, and the metalled road from Meerut to Roorkee runs through the district. When the settlement was made, the line of railway from Meerut to Umballa, which now taps the district, was not talked about. Unmetalled roads connect the town with Bijnaour and Saharunpore, and a third road running from the station of Moozuffernuggur to Shamlee by the bridged Hindun river joins near the latter town the old Kurnal and Meerut road, now little used, and in disrepair.

5. Besides the two main rivers are the Hindun and Kalee Nuddee, which coming from Saharunpore pass on parallel to each other, and with an average distance between them of about 10 miles, towards Meerut, thus forming in the centre of the district a tract to which canal-water has not yet penetrated. The Solanee river empties itself in the north-east over the low lands of Goordhunpore lying on the Ganges, and forms a huge and unhealthy swamp. The principal towns and markets are those of Moozuffernuggur, Thannah Bhowan, Jelalabad, Jansuth, Boorhanah, Meeranpore, Jhinjanah, Shamlee, Kandlah, and Kyranah, with a population in 1872 as here noted.* Jansuth

* Moozuffernuggur,	10,642
Jansuth,	6,117
Shamlee,	9,177
Kandlah,	5,117
Kyranah,	17,772
Thannah Bhowan,	7,486
Boorhanah,	6,162
Meeranpore,	5,924
Jelalabad,	6,904
Jhinjanah,	5,116

and the decayed town of Bedowlee are the seats of an old Syud family, whose ancestors were powerful in the reign of Ferookhsir, from whose Prime Minister, Abdullah Khan, they claim descent. The Bedowlee family held office before annexation in Oudh, where the head of it, Mahomed Hossein, was a Nazim, and his nephew, Mehndee Hussun, a Chukladar. Mehndee Hussun saved the lives of some fugitives during the mutiny, and received a pension and an order to leave Oudh, and keep himself quiet in his jungles at Bedowlee. Here, with the aid of Government, he set himself to fix a colony of Bowreesas, and extend the wretched cultivation of the desolate Goojur tract in which his lands lay. But the attempt has not proved very successful. He also obtained a Rajbuha from the Eastern Jumna Canal, and if, as is now probable, the Settlement of this tract is sanctioned for the full term of 30 years, and Mehndee Hussun supported in his efforts to improve his estates, and consequently the Bedowlee pergunnah, the Government, at the next revision of assessment, should get from it an increase of revenue in some measure proportionate to its natural capacity.

6. The population of the district is various. Goojurs hold the river villages, grazing their own and stealing their neighbours' cattle, and leading the idle life they love. Inland are many villages of Rangurs (Musulman Rajpoots), little different from Goojurs in their habits of life. Scattered among these are communities of Jats, Syuds, and Sheikhs. In the southern pergunnahs of the Doab of the Kalee Nuddee and the Hindun the Jats are very numerous, Rajpoots occupying the northern tract chiefly. Throughout the district the Mahomedan element is decidedly strong; and to an ear accustomed to the Hindeeised-Oordoo of the more eastern districts, the use of Persian phrases even by the commonest people of Moozuffernuggur is very striking.

Character of population.

7. The exports of the district consist chiefly in grain, rice, and sugar, all of which are very extensively grown. The sugar principally finds its way to the Punjab, rice and grain passing in a south-eastern direction. The traffic to the Punjab has been for the most part diverted from the west of the District to Moozuffernuggur, where it proceeds *vid* Saharunpore to Jugadree, Umballah, &c.; the exports from Moozuffernuggur, which are understood to equal those from Meerut or Saharunpore, being steadily on the increase. The Ganges and Eastern Jumna Canal irrigate largely: the comparative areas irrigated by the Eastern Jumna Canal in 1838-39, 1862-63, and 1872-73, being as follows:—

Area irrigated by Eastern Jumna Canal.

Pergunnah.						1838-39.	1862-63.	1872-73.
						Acres.	Acres.	Acres.
Shamlee,	..	..	..	..	..	19,181	10,721	10,532
Churthaol,	..	..	..	..	..		2,709	2,198
Kandhluh,	..	..	..	..	..		17,610	14,768
Shikarpoor,	..	..	..	..	..		493	2,850
Boorhanah,	..	..	..	..	..		2,147	354
Bughras,	..	..	..	..	..		4,212	3,896
Thana Bhowan,	..	..	..	..	..		7,492	6,043
Jhinjhanah,	..	..	..	..	..		6,422	5,248
Bidoulie,	..	..	..	..	..		..	165
Kyranah,	..	..	..	..	..		4,728	6,164
Total,						19,181	56,534	53,220

8. When settlement operations commenced in 1860, the district was in a state of great depression. It had taken a prominent part in the disturbances of 1857, and had suffered terribly in consequence. The Sheikhs of Thannah Bhowan had specially distinguished themselves, had resisted and defeated our troops, and had organized and carried out a massacre of our officials at the neighbouring town of Shamlee. All over the district Goojurs and Rangurs had taken the opportunity of anarchy to pay off old scores against each other. "The return of 1866," writes the Commissioner, "confirms the fact shown in the revised settlement returns, that when the revision was in progress there was a marked diminution of the agricultural population, as compared with the number in 1853." This he ascribes partly to the disturbances in 1857. "Many were killed in fights among the people themselves; many absconded, and have settled in other parts of the country; and an inconsiderable number fell in engagements with the troops." The non-agricultural population, he adds, was less affected, because in the anarchy the large communities were not so open to attack as small villages, and could be helped by the authorities. "Thannah Bhowan is a city of empty houses. A few Sheikhs prowl about their old mohulla. The Rajpoots, the original zemindars, still hang about the outskirts, but there is scarcely a house in the Mussulman quarter which is not Government property." (Page 131, para. 3.) Acres upon acres of excellent land

State of the District in 1860.

in the Thannah Bhowan Pergunnah lay uncultivated. Many of the leading men, notably the Thannah Bhowun Kazea, had disappeared; the Pergunnah was exhausted for the moment, and in much distress.

9. But in November of 1860, the year in which the settlement commenced, it was evident that more trouble was coming. There had been a very bad rainy season, and while the autumn crops were very poor, there was every prospect of a failure of the wheat. It was an anxious time, and ill adapted for judging of the ordinary assets and agriculture of the district. Mr. Keene indeed proposed to defer settlement operations for a short time, but this was not thought necessary. More emigration set in. The decrease of population, referred to by the Commissioner "principally occurred," he says, "owing to the famine. In spite of the exertions made to save life and support the distressed population, there is no doubt that a large number died of destitution and consequent sickness; many removed to districts not affected by the drought; and though perhaps most of these have returned, some remained in their new homes." Colonel Baird Smith, in his narrative of the famine, has drawn a graphic picture of the misery of the famine tract, and the exodus caused by the distress. More land fell out of cultivation, and in most villages the quarters occupied by the miscellaneous castes, which in one or another capacity serve the community, were emptied. Government allowed liberal suspensions and remissions of revenue; but the large balances hanging over the heads of the proprietors discouraged and disheartened them. The season itself was bad enough, but they knew in many cases that in addition to the present revenue the tehseeldar was waiting to carry off the fruits of the next year or two's labour in satisfaction of the outstanding balances of the mutiny. The year 1861, the second year of the settlement which had begun so ominously, was to end worse. For in the rains cholera appeared, and swept over the western pergunnahs of the district. The town of Jhinjanah was sepecially attacked; but the whole district suffered.

10. The sketch here given of the state and circumstances of the district will place before Government the position of affairs at the time when the revision of settlement was entered on. In the 33rd and following pages of the volume will be found a full narrative by Mr. Martin of the course of settlement operations. It is unnecessary to recapitulate the story of their progress, and the Board may pass on to the results of the survey, viz., the comparative area at the former and the present settlement of the several pergunnahs now under report:—

Pergunnahs,	Total.	Barren.	Revenue-free.	Culturable.	Fallow.	CULTIVATED.		
						Irrigated.	Un-irrigated.	Total.
Bugrah, ... { Former, ...	55,460	7,978	1,190	6,858	...	89,434		39,434
... { Present, ...	56,605	6,363	1,090	4,875	2,239	18,896	23,142	42,038
Shikarpore, ... { Former, ...	63,799	10,867	1,980	6,999	...	43,953		43,953
... { Present, ...	64,015	8,487	1,118	4,707	1,216	21,208	27,279	48,487
Boorhanah, ... { Former, ...	50,492	9,495	1,004	6,327	...	33,666		33,666
... { Present, ...	51,074	8,423	848	5,067	1,454	18,518	16,764	35,282
Churtawal, ... { Former, ...	58,092	9,540	1,774	7,192	...	39,586		39,586
... { Present, ...	59,044	6,659	539	5,213	2,284	15,173	29,176	44,349
Thannah Bhowan, ... { Former, ...	56,997	4,764	10,254	11,618	...	30,361		30,361
... { Present, ...	57,590	9,242	8,910	5,127	6,619	19,698	7,994	27,692
Jhinjanah, ... { Former, ...	59,782	5,186	7,592	17,429	...	29,575		29,575
... { Present, ...	60,117	9,040	7,080	14,066	4,920	19,308	5,703	25,011
Shamlee, ... { Former, ...	65,018	9,798	1,022	8,446	...	10,086	35,666	45,752
... { Present, ...	64,767	11,191	922	5,797	1,402	31,223	14,232	45,455
Bedowlee, ... { Former, ...	54,005	7,662	3,925	17,611	...	24,807		24,807
... { Present, ...	55,616	11,101	3,425	14,987	5,559	14,068	8,476	20,544
Kandlah, ... { Former, ...	67,403	8,179	7,482	5,143	...	15,060	31,539	46,599
... { Present, ...	68,152	9,669	2,127	5,391	636	38,806	11,523	50,329
Kyranah, ... { Former, ...	55,210	5,733	4,226	16,135	...	818	28,298	29,116
... { Present, ...	57,545	6,301	1,096	14,782	1,724	24,935	8,707	33,642
Total, ... { Former, ...	586,258	79,202	40,449	103,758	...	267,846	95,503	362,849
... { Present, ...	594,525	86,476	27,155	80,012	28,053	221,833	150,996	372,829

Famine of 1860.

Cholera of 1861.

Comparative areas.

11. The proportions in which the several classes of land make up the total area, and the percentages of irrigation and cultivation at either settlement, are these :—

Percentage of several classes of area.

Pergunnahs.		Percentage of barren.	Percentage of revenue-free.	Percentage of culturable.	Percentage of fallow.	Percentage of irrigated on total cultivation.	Percentage of dry on total cultivation.	Percentage of cultivation on assessable.
Bugrah, ... {	Former, .	14.3	3.1	12.3	...	...	...	85.1
	Present,...	11.2	1.9	8.6	3.9	44.9	55.1	85.5
Shikarpore, ... {	Former,...	17.0	3.1	10.9	...	...	...	86.2
	Present,...	13.2	1.7	7.3	1.8	43.7	56.3	89.1
Boorhanah, ... {	Former,...	18.8	1.9	12.5	...	...	...	84.1
	Present, ..	16.4	1.6	9.9	2.8	52.4	47.6	84.4
Churtawul, ... {	Former, ..	16.4	3.0	12.3	...	...	...	84.6
	Present,...	11.2	.9	8.8	3.8	34.2	65.8	85.5
Thannah Bhowan. {	Former,...	8.3	17.9	20.3	...	...	...	72.3
	Present,...	16.0	15.4	8.9	11.4	71.1	28.9	70.2
Jhinjanah, ... {	Former,...	8.6	12.6	29.1	...	...	...	62.9
	Present,...	15.5	11.7	23.3	8.1	77.1	22.9	56.8
Shamlee, ... {	Former,...	15.0	1.5	12.9	...	22.0	78.0	84.4
	Present,...	17.2	1.4	8.9	2.1	68.6	31.4	86.3
Bedowlee, ... {	Former,...	14.1	7.2	32.6	...	...	...	58.4
	Present,...	19.9	6.1	26.9	9.9	68.4	31.6	49.9
Kandlah, ... {	Former,...	12.1	11.1	7.5	...	32.3	67.7	90.0
	Present,...	14.1	3.1	7.9	.9	77.1	22.9	89.3
Kyranah, ... {	Former,...	10.3	7.6	29.2	...	2.8	97.2	64.3
	Present,...	10.9	1.9	25.6	2.9	74.1	25.9	67.8
Total, ... {	Former,...	13.5	6.8	17.6	...	...	...	77.7
	Present,...	14.5	4.5	13.4	4.7	59.5	40.5	77.5

12. The percentage of increase or decrease in irrigation (so far as figures are forthcoming) and of cultivation in each of the above pergunnahs is :—

Percentage of increase or decrease in cultivation.

								Percentage of increase in irrigation.	Percentage of increase or decrease in cultivation.
Bugrah, ...	...	...	...	...	...	...	...	...	+ 6.6
Shikarpore, ...	...	...	...	...	...	...	...	...	+ 10.3
Boorhanah, ...	...	...	...	...	...	...	...	...	+ 4.8
Churtawul, ...	...	...	...	...	...	...	...	...	+ 12.0
Thannah Bhowun, ...	...	...	...	...	...	...	...	...	— 8.7
Jhinjanah, ...	...	...	...	...	...	...	...	...	— 15.4
Shamlee, ...	...	...	...	...	...	...	209.5	...	— .6
Bedowlee, ...	...	...	...	...	...	...	...	...	— 17.1
Kandlah, ...	...	...	...	...	...	...	157.6	...	+ 8.0
Kyranah, ...	...	...	...	...	...	...	2,948.2	...	+ 15.5

13. These figures show at once the pergunnahs in which the occurrences of the past few years had left their most marked traces. In Thannah Bhowun cultivation had decreased 8.7 per cent., and only 70 per cent. of the assessable area was cultivated. In Jhinjanah there was a decrease of 15.4 cultivation, 56.8 only of the assessable area being under cultivation. In Bedowlee cultivation had fallen 17 per cent., and less than half the assessable area was under cultivation. In Kyranah, though the Eastern Jumna Canal had covered since the last settlement an immensely increased area of irrigation, 67.8 per cent. only of the assessable area was at time of settlement under the plough. The fallow in these pergunnahs was excessive, and the population for the time being much below the ordinary standard. At the same time the Pergunnahs of Shikarpore, Kandlah, and Shamlee were extremely flourishing; and the fever, which has spread so seriously of late years over the canal tract, had but

Remarks on the above

* The figures of the former settlement are in many cases wanting.

recently attracted grave attention. The villages protected by irrigation had made large profits by the famine prices. The southern part of the tract, between the Hindun and the Kalee Nuddee, was largely protected by numerous and very fine masonry wells. The flourishing and depressed pergunnahs may be classed as in the margin. It will be better to take them separately, and to indicate the nature of their soil and population, with the relative assessments of the two settlements, and then to contrast as a whole the results of the former and the present settlement.

Flourishing.	Depressed.
Shikarpore.	Thannah Bha-
Boorhanah.	wun.
Shamlee.	Jhinjanah.
Kyranah (in	Bedowlee.
part).	Churtawal.
Kandlah.	Bugrah.

Mode of assessment
adopted by Mr. Keene.

14. The assessment of the tract comprising the former, or flourishing portion of this area, was made by different officers with rates of assessment formed on similar but not precisely identical methods. Mr. Keene explains his scheme in the following words:—

“It was found that there were features attaching to the management of the land in this district which might be made of peculiar service in gauging the value of any property under examination, the chief of which I beg leave briefly to describe:—

“For instance, it appeared that the classification of soils on the Gornuckpore scheme formed but an imperfect index in Moozuffernuggur, both by reason of the considerable prevalence of corn-rents, and of the arbitrary character of the results. Moreover, however well the soil might be classed, there remained this objection, that it only showed the state of the tillage during an exceptional period, when properties dependent on rain were nearly deserted, while canal villages were the scene of an unusually stimulated cultivation, caused by the high prices of produce. Land not under cultivation at the time of measurement would not of course be described (otherwise than as it might be “old” waste, or “new”); and thus, if A. were a Baranee estate, the *malgoosar* would have an opportunity of enhancing his poverty, as much as his neighbour of B., on the canal would be subjected to an undue exhibition of prosperity, which would dwindle when the return of seasonable rain should send back to A. the cultivators who had left it for temporary employment on B.

“None of these objections applied to a classification of *rents*, according to the customs locally obtaining.

“Rents in this district are of three kinds. For certain articles it is usual to take payment from the tenant in cash, at rates varying according to the article produced,

	Rs.	s.	p.
Sugar, per acre,	17	0	0
Cotton, ditto,	8	8	0
Maize, ditto,	4	0	0
Fodder, ditto,	3	0	0

N. B.—This last article consists of *joar* (*Holcus sorghum*) grown thick, usually called *churree*.

mand.

and the greater or less fertility of the soil and other similar conditions. These articles are noted in the margin, with their average rates of rent, taking one part of the district with another. Such rents are called *subtee*, for what reason I am unable to say. The total amount, as above stated, is about equal to the Government demand.

“The second description of rents is that usually taken in kind or at estimated value for all the other kind of crops, including the whole produce of the spring harvest, as also the millets, *joar*, and *bajra*, when grown for food. The proportion taken is, for the most part, rather less than half, though the full moiety is taken in some instances. This is called *nijkaree*.

“The third kind of rent occurs where the habits or exigencies of the *malgoosars* lead them to farm out patches of land to cultivators, often from other estates, who pay from eight annas to two per local *beegah** all round, whatever they may grow. This goes by the name of *tushkhees*, or fixed assessment. And when, as sometimes happens, this system prevails

* Six *beegahs* equal one acre.

throughout an estate, we learn to a close approximation the value of the assets, and can assess, nearly or entirely, upon the rent-roll (*vide Thomason's Direction to Settlement Officers, paragraph 52*).

"Otherwise we only reach that portion of the rent which may be paid in money, i. e., the *subtee*, and whatever *tushkhees* there may exist, and the problem of ascertaining the value of the property is on the whole still unsolved; for the great difficulty, of course, is to learn the average amount of the *nijkaree* rental in such estates, in which very often the cultivation is almost exclusively in the hands of the proprietary community. *Vide Government Order No. 857, dated 1st July, 1856, paragraph 7:* annual *putwarree's* papers are not capable of adoption as the *jumabundees* of settlement. How untrustworthy they sometimes are I had an opportunity of showing in 1860, in the notorious case of Mouzah Bhynswal, Pergunnah Shamlee, where little more than a tenth part of the profits was entered in the *nikasee* of 1267 Fuslee.

"In order, however, to obtain a minimum capability for purposes of comparison, these papers were utilized as follows:—The total area and rental for five years being added up, and the latter divided by the former, a produce rate is obtained, the application of which to the cultivated area at the time of survey (adding any excess of new waste over and above the quinquennial average) gives the net produce *according to the putwarree's record*. In order to check the tendency to under statement, which is found to be universal, other plans were adopted; among them, an excellent one suggested by Mr. Auckland Colvin, which we call the *reybundee*, and which may be thus described:—Retaining the quinquennial average of *subtee* produce, which is founded on recorded money rates, *nijkaree* average rates for the whole district are formed by the application of Mr. Thornton's appraisement to the mean quinquennial area devoted to the various *nijkaree* crops. The result is added to the *subtee*, and the total far exceeds (in a majority of cases) that obtained from the *nikasee* rates. To render this estimate still more complete, I have caused it to be reckoned at the average prices current of each article for the ten years immediately preceding the great drought.

"As, however, the necessity of filling up the No. III. Statement involved the classification of soil, and as this method undoubtedly furnishes a very useful standard of comparison, another estimate was formed by applying Mr. Thornton's circle rates to the classified area during the year of survey. This method is free from the objection applicable to the last named, which is founded on a district average of fertility; whereas, if the classification of soil be but correct, the application of the rates of a properly selected circle really shows the exact state and value of the cultivation, *during the year under review*, at the old revenue rates. To bring this into conformity with the other estimates, from 25 to 33 per cent. must be added, according to what there may be reason to believe was the Settlement Officer's principle of assessment. And it having been found that the average price of wheat has lately been ruling much higher than it did in 1840, it has to be remembered, in examining the No. III. valuations, that a further addition of about a quarter will be required to give a fair jumma-bundee in all estates where no special reason may be shown in the remarks for a lenient jumma. In the Pergunnah of Boorhanah, the estimate thus formed is more than usually fallacious, because, not having been settled by Mr. Thornton, it had no rates available for expressing the supposed value of the different classes of soil but those of Mr. Thornton's nearest circle, and this had no necessary bearing on the question. This estimate, therefore, here, and in the estates of other parts similarly situated, was scarcely regarded at all in assessing; and the only way of giving reliable data in the No. III. Statement has been to add the rental classification below that prescribed. Thus, in Nusseerpore, we find the total value (according to the rates of the nearest *chuck*, that of Shoron) to be 890, while the jumma is Rs. 773 and the canoongoe's *doul* 918, or more than the *whole assumed value*. The lower entries, however, show that the value assumed was in fact Rs. 1,086, on which my proposed jumma of Rs. 535 becomes reasonable, and the former jumma is shown to have been

excessive. So in Shadubur, the rental, according to soil, is Rs. 1,782, the jumma being Rs. 1,380. My assumed value was Rs. 2,254, and my proposed jumma is Rs. 1,131.

"Local knowledge, and careful investigation of the rent-rate, compared with the records of the Act X. files, will suggest many clues to the valuation of assets; and a pergunnah rate will be ultimately framed for irrigated land, and a second for the dry land. The application of this to the respective total areas forms a pergunnah *jumma*, the distribution of which over the various estates will be checked by constant reference to the other estimates, and its discrepancy in particular cases will supply hints for study on the spot.

"Finally I have found in working after such men as Elliott and Thornton, that a proportional increase on their *jummabundees*, with a due allowance for the advance of prices since their day, will often yield a sum curiously corresponding to the results of other, and quite independent, estimates.

"To illustrate the nature of these operations, I would beg examination of the sub-joined specimen estimates taken from a number of estates which have no canal irrigation, and where the breaking up of new land, and the rise of ruling prices, are the only changes which have occurred since settlement:—

"*Poor Baleean (Jumma Rs. 4,834).*

<i>I.—Nikasee rates.</i>				<i>II.—Mr. Thornton's rates.</i>			
"Zubtee, ..	...	...	Rs. 3,215	...	...	Rs. 3,215	
"Nijkaree,	...	...	,, 5,975	...	...	,, 10,775	
			<hr/>			<hr/>	
			,, 9,190	...	...	,, 13,990	
			<hr/>			<hr/>	

"III.—Circle rates, Rs. 11,004.

"IV.—At pergunnah rate, Rs. 12,380.

"V.—Proportional increase, Rs. 10,433.

"Mr. Edwards left it on record that this estate would bear a 'material increase of *jumma*.' This opinion is borne out by all but the first estimate, although the second, or *reybundee*, formed on Mr. Thornton's rates, is in excess of the others. This is readily accounted for on visiting the property, which, after a minute and protracted examination, proved to contain a great deal of land of a quality below the average fertility. The jumma, therefore, though it should be raised, should not be so high as the second estimate would appear to indicate. Next let us take Nizampore (*jumma* Rs. 600)—I., Rs. 841; II., Rs. 1,240; III., Rs. 1,205; IV., Rs. 1,168; V., Rs. 1,205. Here, again, the *nikasee* estimate fails us, but the others keep well together. The estate is of fair fertility, and is known to have borne the *jumma* well, the obvious inference being that it should be retained; the mean of the estimates, if we reject the first, being 1,204."

15. Mr. Colvin, assessing as a rule on the main lines of the system above explained, varied his system with the peculiar circumstances of the pergunnah assessed. In Bedowlee, with its huge uncultivated area, the assessment was based on an all-round rate on the cultivable land. In Thannah Bhowan, apart from its depopulated and temporarily depressed state, exceptional difficulties presented themselves, arising from the peculiar time in which the measurements were made. It was the year 1860-61, when cultivation was almost confined to irrigated tracts: when consequently a comparatively small area was cultivated; but in the smaller area the proportion of richer crops was exceptionally large. Rents in Moozuffernuggur being largely paid in kind, it was necessary to correct these proportions. In Shamlee, Kyranah, and Kandlah the manured land was peculiarly dealt with; and the paragraphs concerning the mode of assessment adopted may be here cited:—

"Distinction was in Shamlee first made between land actually irrigated in the year of measurement—land not irrigated that year, but capable of, and in other years

Mode of assessment adopted by Mr. Colvin.

receiving, irrigation—and *bond fide* unirrigated land. The second and first kinds had hitherto been classed together, and an offset made against the average assumed to fall into the second class. Now, however, they were carefully distinguished. Irrigated rates were applied only to the area actually irrigated in the measurement year, and the two other classes were assessed at the unirrigated rates. The object in assessment being to ascertain the outturn of one year, irrigated rates applied to land unirrigated in the year of measurement would have assumed a greater average of better crops and of the better kinds of crops than actually was the case. Where this second class (*moheeta*) was larger than could be fairly accounted for, and above the circle average, I summarily included a part of each kind in the irrigated area. Similarly, and on the same principle, manured land was divided into land manured the year of measurement, and manured previous years, or for next year's crop. On the first only were manured rates laid, the rest being classed as *roslee*. These distinctions were valuable for assessment, and, while subjecting to irrigation rates only the irrigated area, show, for statistical purposes, the whole area capable of irrigation. This plan was pursued in Pergunnahs Shamlee, Kandlah, and Kyranah, and will explain the entries of *moheeta*, *meesun*, and *moheeta* irrigation in the No. II. Statements. For the rest, the principles detailed in the Thanah Bhawun Report were followed."

16. The cash rents found existing for the several classes of crops paying in cash were applied ordinarily to the area in each circle occupied by their respective crops. To the area occupied by crops paying in kind, estimates of the produce were applied, with the value of the landlord's rent expressed in money. Mr. Thornton's revenue rates were also used, Mr. Keene enhancing them in the pergunnahs assessed by him in the proportion in which he believed prices to have risen. Summary rates on irrigated and unirrigated land used by the Settlement Officers at the last settlement were also used. That settlement had worked well, the old rates had been carefully made, and in many instances were found extremely useful.

Use of Mr. Thornton's
producerates, and old sum-
mary rates.

17. With reference to the rates used by Mr. Colvin, two objections raised by Mr. Cadell, in his report on the permanent settlement of these pergunnahs, must be noted here: the first refers to an alleged disregard of peculiarities offering themselves in the characteristics of certain pergunnahs; the second, to misunderstanding of the system of classing *moheeta* lands, alluded to in para. 15 of this letter.

18. In para. 4, Mr. Cadell says that Mr. Colvin "departed from the system of his predecessors—Sir H. Elliot and Mr. Plowden,—and adopted that which had been used so much in the north of this district, and in Saharanpore, of assessing tracts, *viz.*, assuming or working out rates on a variety of soils not known to the people, and which in no way rule the rent-rates. Sir H. Elliot, coming up from the south, adhered to the simple and effective method in general use among the people, in fixing the rent-rates on irrigated and unirrigated land."

Remarks on objection
raised by Mr. Cadell.

19. In reference to this it will be sufficient to quote para. 3 of Mr. Colvin's report on Kandlah, page 104, Mozufferauggur Settlement Report:—"In Kandlah, as in Kyranah, I could find in none of the Settlement Reports any mention of the assessment of the pergunnah as a whole. Detached villages were mentioned by Mr. Plowden and Sir H. Elliot, but rates and circles were not forthcoming. I believe the Trans-Hindun villages were settled by Sir H. Elliot, and the Cis-Hindun by Mr. Plowden. I made two fresh circles—the Kandlah and Parasolee—as marked in the map, and distributed the other villages among the Shamlee, Kyranah, Bangur and Kodanah circles. In the new circles I made new rates on the principles detailed in the Thanah Bhawun Report, and for the same circles I used also a set of summary rates used by Mr. Plowden in assessing similar and neighbouring pergunnahs, and to be found in pages 238, 239, Volume I, printed Settlement Reports. These are reduced to half assets."

And then Mr. Colvin gives the rates :—

							Irrigated.	Unirrigated.
							Rs. a. p.	Rs. a. p.
Cis-Kirsunnee,	...	...	...	...	...	...	2 8 4	1 4 2
Trans-Kirsunnee,	...	...	...	...	...	...	3 9 9	1 12 6

It is not clear how, in the face of this statement that Mr. Colvin used rates both on Mr. Thornton's and Mr. Plowden's plan, both on soils and on land classed merely as irrigated and unirrigated, Mr. Cadell could write,—“ Mr. Colvin departed from the system of his predecessors—Sir H. Elliot and Mr. Plowden, &c., &c.” Inspection, as a fact, shows that the jumma according to these irrigated and unirrigated rates is invariably given in each No. 2 Statement, and is very frequently the jumma actually adopted, and that the result of these rates and Mr. Thornton's soil rates very nearly corresponded.

20. As to the second point in paras 4, 5, and 6, it is stated that Mr. Colvin misunderstood and misapplied Mr. Thornton's system of what he called *moheeta*. Mr. Cadell explains what that system was :—

“ Briefly, Mr. Thornton took the average of the outturn of lands actually irrigated in the year of measurement, and lands irrigated in other years, and applied them to the sum of both kinds of lands. The rents of the lands not irrigated that year were estimated on ‘ the produce of the latter as if the land were unirrigated.’ Subject to precautions unnecessary to detail here, Mr. Colvin put wet rates on the lands actually irrigated in the year of measurement, and dry rates on the lands irrigable, but not irrigated that year.”

21. The assumption that lies at the bottom of both processes is identical, viz., that in calculating the annual value of rents taken in kind, the produce of that area only which is annually irrigated must be taken as the produce of irrigated land, and the rent estimated accordingly. Land, in other words, coming under irrigation by rotation, the whole *irrigable* area cannot be estimated to produce, within any one year, wet crops.

The two processes have very similar results. Mr. Cadell says :—“ Mr. Colvin forgot, when diverging from the method of his predecessors, that although he might, as his system required, summarily raise the proportion of irrigated land to the circle average, no attempt was made to secure entries which would represent the ordinary state of the tract, nor the circumstances during a single and possibly very exceptional year.” But this applies just as much to Mr. Thornton's actual system. What did he base his area of *moheeta* on? The extent of the *moheeta*, being land assumed to bear unirrigated produce, must have largely influenced the average rate alluded to by Mr. Thornton. If the actual irrigated and the unirrigated areas were correctly measured and recorded, Mr. Colvin was treading on safe ground. Of course the value of the rent-rates deduced in the mode described depends on the assumption that the year in which his measurements were made, was an average year: and as a matter of fact the years 1861-63, were average years.

Circle Rent Rates.

22. The pergunnahs were much sub-divided into circles for assessment, the features of the country being very changeable, with its area largely affected by streams, and comparatively undulating; while tracts of *oosur* land, and large plots of *dhak* jungle, irregularly break up the character and extent of cultivation. The rent-rates adopted for each circle are given in an appendix to this review.

23. It will have been seen that the assessing officers differed in opinion as to the prices which should be applied to kind rents, and to the necessity of adding to Mr. Thornton's assumed rents on the ground of a permanent rise in prices. In para. 30 of his letter the Commissioner writes as follows :—

"Messrs Colvin and Grant were of opinion that there has been no rise in prices since 1841. Mr. Martin differs from them, and thinks that an allowance of 25 per cent. should be made in all calculations based on the value of grain. The following table shows the prices recorded by Mr. Thornton as the average of 20 years preceding his Settlement, and in juxta position the price currents of the Shamlee for 24, and Moozuffernugger markets for 15 years immediately preceding the late revision. Mr. Thornton mentions that allowance has been made for the difference between the prices the cultivators and the grain-dealers of the bazars receive. He does not mention what allowance was made, and leaves it to be conjectured that the prices given are those received by the cultivators. The ordinary difference between the price which the cultivators received and what the purchasers from them demand on bringing the grain into the market is estimated to be 10 per cent., which has been deducted from the prices given by Mr. Martin.

Prices.

Table showing average of the prices current in Mr. Thornton's time and now. :—

	Average of 20 years given by Mr. Thornton.	Average of past 24 years in Sham- lee market.	Average of the last 15 years in Moozuffernug- gur market.	Remarks.
Wheat,	36½	26	27½	
Gram,	42½	28	31½	
Barley,	54½	38	44	
Rice,	51½	38	38	
Fine rice,	42	32	7½*	
Moong,	31	28	26	
Jowar,	44½	32	30½	
Bajra,	43	31½	33	
Mote,	40½	31	Not given.	

"This table shows that Mr. Martin is decidedly right in believing that there had been a great rise in prices, and that Messrs. Colvin and Grant were in error in this one matter. Mr. Thornton expressly mentions that the weight adopted by him was the seer which weighed 90 rupees, the standard of which was from 171·198 to 173 grains troy. The weight in the latest price current is 88 Government rupees, or 92 Furruckabad oblique rupees to the seer."

24. The harvest prices for Shamlee and Kyranah are given at page 134. the Commissioner apparently, when he writes of Mr. Martin, alludes to Mr. Keene. The former gives a table of prices for 15 years from 1849 to 1864, but makes no particular comment on it. The latter, in para. 14 of his report (page 90), says it has been found that the average price of wheat has lately been ruling much higher than it did in 1840. The tables furnished by Mr. Colvin embrace the period between 1841 and 1859.

The comparison made by the Commissioner of the period of 1850 to 1864 with the 20 years *preceding Settlement* is not to the point. He speaks, indeed, of the last of the above averages as being an average, of "the 15 years immediately preceding the late revision," (page 5, para. 30). But that table is taken from the statement given at page 18, which ranges from 1849-50 to 1863-64. The "late revision" commenced in 1860. A rise of prices *during* the twenty years from 1840 to 1860 is what the Assistant Settlement Officers could not ascertain. A comparison of the last 15 years before 1864, including the famine prices of 1860-61, with the 20 years before 1840, from which Mr. Thornton had been careful to exclude 1838-39, must of course show a rise in prices : 1860 commenced the decade of higher prices which now prevail; and as Messrs. Colvin's and Grant's return ceased with 1859, and their assessments began in 1861-62, though the Commissioner is right in his facts, he is wrong in supposing that they are furnished by the figures which were before the Assistant Settlement Officers, or that they could have possibly come under their cognizance at the time of Settlement.

Mr. Cadell, while giving figures to show that when he wrote in 1870 prices had risen, falls into the same error of taking a period wider than and subsequent to the

* In this entry the very finest rice is evidently meant, not the kind quoted in the other columns.

period included in the calculation framed in 1860. The figures furnished by Mr. Cadell completely bear out the deductions of his predecessors. Taking the periods 1841-45; 1846-50, 1851-55, 1856-60, we have the following average for the price of wheat:—

1841-45,	...	33	1851-55,	...	38
1846-50,	...	34	1856-60,	...	36.

Of course there can be no question of prices having *subsequently* risen : and so far as the value of the landlord's rental on crops paid in kind was estimated on an average lower than that now existing, it was under-estimated. But prices during the term of Settlement had fallen, not risen.

Comparative Area of
the five Pergunnahs of
the flourishing tract.

25. The Board now turn to the assessment of each pergunnah *seriatim*. The comparative apportionment of the area in the flourishing pergunnahs was as follows:—

Pergunnah.	Period of Settlement.	Total Area.	Barren.	Revenue-free.	Culturable.	Fallow.	CULTIVATED.			Total assessable.
							Irrigated.	Unirrigated.	Total cultivation.	
Shikarpore,	Former Settlement, ...	63,799	10,867	1,980	6,999	...	43,953	43,953	50,952	
	Present Settlement, ...	64,015	8,487	1,118	4,707	1,216	21,308	27,279	48,487	54,410
Boorhana,	Former Settlement, ...	50,492	9,495	1,004	6,327	...	33,666	33,666	39,992	
	Present Settlement, ...	51,074	8,423	848	5,067	1,454	16,518	16,764	35,282	41,803
Shamlee, ...	Former Settlement, ...	65,018	9,798	1,022	8,446	...	10,086	35,666	45,752	54,198
	Present Settlement, ...	64,767	11,191	922	5,797	1,402	31,228	14,232	45,460	52,654
Kyranah, ...	Former Settlement, ...	55,210	5,733	4,226	16,135	...	818	28,298	29,116	45,251
	Present Settlement, ...	57,545	6,301	1,096	14,782	1,724	24,935	8,707	33,642	50,148
Kandlah, ...	Former Settlement, ...	67,403	8,179	7,489	5,148	...	15,060	31,539	46,599	51,742
	Present Settlement, ...	68,152	9,669	2,127	5,391	636	38,806	11,523	50,329	56,356
Total, ...	Former Settlement, ...	391,922	44,072	15,714	43,050	...	(a) 190,086	...	199,086	242,136
	Present Settlement, ...	395,553	44,071	6,111	35,744	6,432	184,690	78,505	213,195	255,271

Of the assessable area, 83 per cent. is cultivated; of the cultivated area, 63 per cent. is irrigated; fallow, in the years of measurement, amounting to 6,432 acres only, or 2 per cent. of the assessable area. Cultivation has increased, judging by the figures, but this is partly due to rent-free land falling in. The increase of irrigation as a whole cannot be stated; but in Kyranah the increase is immense; in Shamlee it is more than trebled; in Kandlah, more than doubled: in Shikarpore and Boorhana, where irrigation is chiefly from wells, the increase will probably not have been very great.

Pergunnah Shikarpore.

26. Of Shikarpore, Mr. Keene, the Settlement Officer, writes,—“ Few peculiarities call for detailed notice. It will be remembered that all the tract between the Kalee and Hindun Rivers is at present dependent on the seasons for its supply of water. About three-fourths of this pergunnah are included in this tract; and on this, if on no other account, an increase of revenue is hardly to be looked for. But inequalities, whether previously overlooked, or only of recent occurrence, would necessarily demand adjustment. Variations from average of fertility would be mostly what they were at Settlement, and due allowance would have been usually then made. But I think that undue regard may sometimes have been had to other and more casual variations, and this I have attempted in some degree to modify. As to soil, it is to be observed that some part of the Cis-Hindun tract is crossed by a *bhoor*, or belt of sand-hill, which adds to the already noticed absence of

(a) Represent the total cultivated area.

canal water, the farther disadvantage of poverty of soil (and impossibility of sinking earthen wells) as far as it extends. In other parts, however, the soil is of excellent quality, except that near the rivers it again becomes poor, and is so uneven as almost to deserve the title of 'hilly;' but it is mostly tilled (as is also a good deal of the *bhoor*), and produces wheat, barley, and *bajra*. The *khadir* land also contains the fossil alkali known as *reh*, the presence of which the people whose estates border the Kalee Nuddee attempt to attribute to the tailing into that stream of escapes and *rajbuhas* from the Ganges Canal on the opposite side. This explanation, however, I strongly doubt, for I found the substance at a depth of six feet below the surface, the upper *stratum* being quite free; and I know of no reason for disbelieving that the Kalee is itself a *medium* for its deposition. If it were the canal that for the first time brought down the *reh*, it would, I think, only be found in recent and superficial layers, the main canal having only been opened in 1854. The *khadir* fields are also secure against drought: indeed, some of them are swamped, like those in the Solanee *khadir*, during the present season. But they produced crops of sugar and rice, which, though of inferior quality, and paying a lower rental than *bangur* crops, are not precarious. The upper country, in the hands of Jats and Tuggas, yields excellent crops of sugar, wheat, cotton, and *joar*. The assessments, too, have on the whole pressed less heavily than in some parts of Boorhana; and the rates on which the old jumma of the pergunnah falls on the cultivated and culturable area, may still be taken as a fair standard, being respectively Rs. 2-4-3 and Rs. 2-0-2. Undoubtedly, there is a difference between the circumstances of the Cis-Hindun, or *Shoron* proper, and the Trans-Hindun, or Shikarpore tract, and this calls for some discrimination in distributing a pergunnah *jumma*. The tract beyond the river is not free from ravines, but it has them only on one side, instead of on two sides; and not only has it no *bhoor* belt, but it has a considerable share of canal-irrigation. It has the further advantage of having been all assessed by one, and that a very able officer (the late Sir H. Elliot), while the *malgoosaree* communities are almost exclusively industrious and thriving Jats. Whether any further development of irrigation is to be expected I am not aware; but as I know that a survey is on foot, with a view to the feasibility of a cut from the Hindun, on this ground, as also for the sake of uniformity, I have taken twenty years as the *minimum* period of all the engagements. I do not, however, feel justified in reckoning on any very certain extension of the capabilities of estates in this neighbourhood. Their resources are great, but they have been fully taxed, and the absence of confidence in their increase appears to preclude any general increase in their taxation."

In pages 30-32 of Mr. Cadell's Report the circumstances of the pergunnah, and of the two tracts which compose it, are further described. The pergunnah, it may be gathered from Mr. Cadell's remarks, is fairly assessed. High as Mr. Keene's rates were, they still in some instances fall short of half assets. The villages in this part of the district, cultivated by Jats, are of great fertility, and are most carefully and admirably cultivated. Mr. Keene more than once states that he showed consideration to these hard-working communities. "Not only in this, but in most pergunnahs that I have had to deal with, I have found officials recommending high assessments on particular estates, simply and solely because they were held by wealthy individuals or by industrious tribes; while the *malgoosars*, for their part, lay great stress on their want of capital and other personal disadvantages. Each class seems disposed to regard the land revenue as a kind of income-tax rather than what it really is, the landlord's rent. Doubtless the hereditary claims of the *malgoosars* form a source of sentimental influence which is hard to resist, but it cannot be indulged beyond the limits imposed by the alternative necessity of allowing a *malikana*. Otherwise we must, by parity of reasoning, be driven to place an exorbitant demand on estates when they happen to be held by persons of more than usual energy and enterprise, which is equivalent to the manifest absurdity of treating penally the exhibition of merit and resource.

Hence, in the *Shoron* sub-division of this pergunnah, I have sacrificed many small increments which were recommended to me, having regard to the 'casual variations' of Mr. Bird.* On the same principle,

palpable idleness on the part of the proprietary body has not been able to constitute a claim to indulgent rating."

Cultivation had increased by 4,534 acres, which at the old rate of Rs. 3-11-4, would give Rs. 14,408. The total approximate increase of rental is Rs. 43,305, or a net increase of Rs. 29,307, or 17 per cent. The former figures of irrigation are not forthcoming; but from Mr. Cadell's remarks in page 32 it may be gathered that the canals have not much extended irrigation in this pergunnah.

The result of Mr. Keene's calculations were as follows :—

Pergunnah.	Assumed rental.				Assumed rent-rate per acre of assessable land.				Assumed rent-rate per acre of cultivation.			
	Former.	Present.	Increase.	Decrease.	Former.	Present.	Increase.	Decrease.	Former.	Present.	Increase.	Decrease.
	Rs.	Rs.	Rs.		Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs. a. p.	Rs. a. p.	
Shikarpore.	1,63,157	2,06,602	43,445	...	3 3 3	3 12 9	0 9 6	...	3 11 4	4 4 2	0 8 10	...

Pergunnah Boorhana.

27. Boorhana, "a small division situated at the confluence of the Kalee and Hindun Rivers, at the extreme south of the district, formed part of the Principality of Sirdhana, and was settled by Mr. Trevor Plowden, when it lapsed to the British Government in 1839 by the Begum's death. It enjoys a soil in which kutchas wells can be sunk at small expense, and last many years, the water being about 12 yards from the surface in the upper or *bangur* land, and not more than 8 yards in the *khadir* or meadow land, which is also occasionally watered from the streams which it borders. Sugar, cotton, maize, and wheat are produced. The absence of *bajra* (*Panicum spicatum*) indicates a good soil, and the marts of Sirdhana and Shamlee are accessible by good roads. The great drawback consists in the tendency of the drainage to cut ravines in its passage to two rivers, which gradually eat into the heart of the best lands. It is also to be observed that the rates on which Mr. Plowden based his assessment are rather high, ranging as they do from Rs. 2-6-5 to Rs. 6-6-5, especially as he took the full three-fourths for the Government demand. Hence almost of necessity it happened that many of the cultivators, and some even of the sharers in estates which were not adequately provided with wells were unable to hold their own during the late protracted drought, which, as noted by Mr. Edwards, has prevailed ever since the disturbances of 1857 in that part of the district. 'So much so,' adds that officer, 'that the people have taken the idea into their heads that the locality is accursed on account of their misconduct.' Many of the refugees are still absent; while those who have returned are deficient in stock in spite of the liberal aid administered by the Central Relief Committee, which was not adequate to the full extent of the evil. Above Rs. 15,000 were accordingly suspended, out of a total demand on the Pergunnah of Rs. 75,148.

In Boorhana, the old settlement was apparently based on three-fourths of the assets, and the rental was Rs. 90,024: now it is assumed at Rs. 1,39,692, an increase of Rs. 49,668, or of 55 per cent. Cultivation has increased by 1,614 acres only, or 4.8 per cent. At the former rate of Rs. 3-6-10 we have an increase of Rs. 5,550 only, giving a net increase of rental of Rs. 44,118; justified probably by the rise in prices which has subsequently taken place, but which might otherwise have proved excessive. Mr. Cadell states that in some instances the reductions allowed from the old assessments have been "enormous." But in point of fact the old assessment pressed upon the better villages; and though in some cases assets may be retained above the half share due to the proprietors, it must be remembered that both this and the Shikarpore Pergunnah are dependent for irrigation in a chief measure on wells and on the industry and cattle

of the village communities which mostly own and occupy them, and are not consequently secured from drought.

The rental results are as follows :—

Pergunnah.	Assumed rental.				Assumed rent-rate per acre of assessable land.				Assumed rent-rate per acre of cultivation.			
	Former.	Present.	Increase.	Decrease.	Former.	Present.	Increase.	Decrease.	Former.	Present.	Increase.	Decrease.
	Rs.	Rs.	Rs.		Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs. a. p.	Rs. a. p.	
Boorhana,	90,024	1,39,692	49,668	...	2 4 0	3 5 6	1 1 6	...	2 10 9	3 15 4	1 4 7	...

28. Shamlee is "very unequal in fertility. The villages grouped about the canal are naturally fertile, though the soil is adapted in each set for different crops. In the west corner a small plot of villages takes after the high character of the neighbouring Kyranah bangur circle. The villages to the east of Kirsunnee again are widely different. Those which I have grouped in the Buntée Khera Circle have a poor soil and scanty irrigation; while the villages on the extreme east, the Kodanah Circle, are among the most naturally fertile in the district. There is some low land near Salawur and Kuroree injured by the interception of drainage caused by the canal; but Major Brownlow has run a drain, as marked in the map, from Salawur to Sikkuh, and hopes to carry off the water into a natural nullah running into the Kirsunnee. The inhabitants are chiefly Jāts, and the villages *bhyachara*. Shamlee is the only large town. The chief roads are from Shamlee to Moozuffernuggur, crossing the Hindun at Tutavee, where a bridge is now building. This road is much used, sugar and rice coming up, and grain going down it. From Thannah Bhawun another road runs to Shamlee; and from Shamlee, three more branch out to Jhinjana, Kyranah, and Kandlah. Perhaps there is more traffic on the Shamlee-Kyranah road than on all the others. The sugar of Shamlee leaves by this road for Paniput and other districts of the Punjab, and salt comes up this road to Shamlee. The Eastern Jumna Canal runs to the west of Shamlee."

Pergunnah Shamlee.

In Shamlee we have stationary cultivation, a large extension of irrigation (21,137 acres against 10,086 at last settlement); an old rental of Rs. 1,85,102; a rental at present settlement of Rs. 2,40,114 giving an increase of Rs. 55,012, or 30 per cent., due to the larger irrigated area. Of this pergunnah Mr. Cadell notes, page 38:—"As far as I have been able to ascertain, the present assessment is, as a rule, just both to Government and the people." The old average rent-rate was Rs. 4-0-9, the new, Rs. 5-4-6. Rents are largely paid in kind, and it is probable that the assessment now falls lightly, the Settlement Officer having assessed on lower prices than those which have recently prevailed. But the Pergunnah has suffered severely from malarious fever, and Mr. Cadell, (p. 47) speaks of the land as "slowly but steadily deteriorating."

The rental results are as follows :—

Pergunnah.	Assumed rental.				Assumed rent-rate per acre of assessable land.				Assumed rent-rate per acre of cultivation.			
	Former.	Present.	Increase.	Decrease.	Former.	Present.	Increase.	Decrease.	Former.	Present.	Increase.	Decrease.
	Rs.	Rs.	Rs.		Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs. a. p.	Rs. a. p.	
Shamlee, ...	1,85,102	2,40,114	55,012	...	3 6 8	4 9 0	1 2 4	...	4 0 9	5 4 6	1 3 9	...

29. Of Kyranah, the Settlement Officer says :—"The pergunnah has three distinct classes of villages, and these I grouped together for purposes of assessment. The best are those lying in the *khadir*, the spring crops of which are very fine. The next are the villages with a poorer soil,

Rental past and present.

but abundant irrigation and ample population, brought together in the Kyranah Bangur Circle. The last and worst is the clump of villages lying across the Katha. They resemble in every respect the Bidowlee villages, being as indifferent in soil and cultivation, and as unfortunate in their Goojur proprietorship. The only large town is Kyranah, the largest town in the district. It carries on a large trade in the export of tobacco, and has a population of Sheikhs and Goojurs, who are well-to-do. One road comes in from Shamlee, another from Jhinjana, and a third from Kandlah, and a road leaves Kyranah for the Punjab Ghat. Along this road, and from Kyranah to Shamlee the chief traffic goes, and it should, if possible, be metalled, being naturally sandy and heavy. The villages of the pergunnah are owned almost entirely by Goojurs, and are, as usual, chiefly *bhyachara*. The former assessment was very light. Had it not been

Remarks on former assessment.

for fear of too rapid an increase in the demand, I should have increased the jumma considerably more than I have done; for in every pergunnah where an increase, though fair even with due regard to outlay, was excessively large, I have gone somewhat below it, believing that a sudden shock to the landlords, and change in their means of subsistence, would inevitably lead to distress, and degrade them from the position of comfort and independence in which I found them. Even the Trans-Katha villages, ill-cultivated as they appear, had been reasonably and fairly assessed, and were, as a rule, well off, and afforded in that respect a strong contrast to the Bidowlee Pergunnah. I may add that the rates of the old Settlement on their malgoozaree and cultivated areas answered to my new Bidowlee rates, an omen, I trust,—of the future prosperity of that pergunnah.”

Pergunnah Kyranah.

30. In Kyranah, populated mostly by Goojurs, where reformation under the influence of canal-water is remarkable, cultivation has increased by 4,526 acres, or 15·5 per cent. The rental amounts to Rs. 1,04,614, or Rs. 28,351 (equivalent to 37·1 per cent.) in excess of the old. The increase in irrigation is very large, 24,117 acres. The old rate on the extended cultivation gives 11,833, leaving a net increase of 16,518, due mainly to irrigation.

The rental results are as follows :—

Pergunnah.	Assumed rental.				Assumed rent-rate per acre of assessable land.				Assumed rent-rate per acre of cultivation.			
	Former.	Present.	Increase.	Decrease.	Former.	Present.	Increase.	Decrease.	Former.	Present.	Increase.	Decrease.
	Rs.	Rs.	Rs.		Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs. a. p.	Rs. a. p.	
Kyranah, ...	76,263	1,04,614	28,351	...	1 11 0	2 1 5	0 6 5	...	2 9 10	3 1 9	0 7 11	...

In this, as in the Pergunnah of Kandlah, the assumed rental of assessment is less than the *bonâ fide* assets. In Kandlah the Settlement Officer notices that he had lightly assessed the extensive *qasba* lands; and in Kyranah he writes :—“The villages of the pergunnah are owned almost entirely by Goojurs, and are, as usual, chiefly *bhyachara*. The former assessment was very light. Had it not been for fear of too rapid an increase in the demand, I should have increased the jumma considerably more than I have done.” Mr. Cadell adds :—“This is just the tract in which of all others the effect of a sudden enhancement of the Government demand was most to be feared. The Goojur communities, under the encouraging influence of canal-irrigation, were beginning to extend and improve their cultivation, and if not entirely to abandon their ancient lawlessness, to become at least more dependent for their support upon agriculture. Notwithstanding, therefore, the large increase to the assets of this tract, Mr. Colvin was very cautious in raising the Government demand; and the result is an assessment which, suitable in most cases for a limited term of years, is not fitted for permanence.” And again, “notwithstanding the great care which has been taken not to press hardly on the Goojur zemindars, there has been a very considerable advance since last Settlement.”

31. Kandlah "is not inferior to any pergunnah in this part of the district, except, perhaps, Shamlee. The villages to the east of the

Page 104.

Hindun lie rather high, but the soil is naturally fertile. To the west, the villages between the Hindun and the canal are, next to the Kodanah Circle of Pergunnah Shamlee, the most fertile I have seen; while to the extreme west the land, though inferior to the rest of the pergunnah, is on a level with the average of the neighbourhood. The cane in the best group of villages pays as high as Rs. 18 per acre, and the cotton Rs. 7-8. The only higher rent-rates I know in this part are in the Kodanah Circle, where the sugar pays Rs. 19 per acre, and the cotton Rs. 10-5. But that circle is the best on this side the Kalee Nuddee. A roads runs from Boorhanah to Kandlah and on to Kyranah, and another from Shamlee to Kyranah, and on by Ailum to Baghput. This is the chief road in the pergunnah; grain, salt, and cane, passing up it from and to the Saharunpore District. Kandlah itself is not a trading town, but inhabited chiefly by a well-bred family of Sheikhs, and another of Moguls, both formerly *maafedars*. There are, too, a good many Goojurs. Wheat is the chief crop grown, but tobacco has been lately taken up, and is found very profitable. The chief caste in the Trans-Hindun villages are Goojurs, wonderfully transformed by the canal, and in some degree respectable themselves, though not the cause of respectability in others. They find agriculture more profitable than thieving, but they harbour Kahars and others, who live by roguery, and are always ready to pass on a stolen buffalo, or foil the enquiries of a Police officer. Among them are sprinkled a few Jats. The Cis-Hindun villages are occupied by Jats and Rajpoots. The chief form of village, as usual, is *bhyachara*."

The rental results in Kandlah are as follows :—

Pergunnah.	Assumed rental.				Assumed rent-rate per acre of assessable land.				Assumed rent-rate per acre of cultivation.			
	Former.	Present.	Increase.	Decrease.	Former.	Present.	Increase.	Decrease.	Former.	Present.	Increase.	Decrease.
	Rs.	Rs.	Rs.		Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs. a. p.	Rs. a. p.	
Kandlah, ...	1,55,014	2,22,820	67,806	...	2 15 11	3 15 3	0 15 4	...	3 5 3	4 6 10	1 1 7	...

32. In Kandlah, we have a former rental of Rs. 1,55,014; and a present of Rs. 2,22,820: an increase of Rs. 67,806, or 43·7 per cent. Irrigation has increased from 15,060 to 38,806 acres, or by 23,746 acres. Cultivation has increased from 46,599 to 50,329, or by 3,730 acres, or 8 per cent. only: so that the increased rental is almost wholly due to irrigation. Mr. Cadell, writing of this pergunnah, alleges that the rule laid down in its assessment, and already alluded to regarding *moheeta* land, resulted in an under-estimate of irrigation. But it has been explained that where rents are mostly in kind, it is obvious that, in estimating annual outturn, the produce only of lands irrigated within one year can be taken. It cannot be assumed in basing rates on rents in kind, that an acre irrigable, but not irrigated annually, bears annually the yield of an irrigated acre. The year in which Kandlah was measured (1862-63) was in no way whatever an exceptional year; on the contrary, a good average year. Mr. Cadell instances Ailum and Nalah as cases in point. "In the former township there are only 9 per cent. of the irrigable area entered *moheeta*; in the latter no less than 36, a difference in proportion for which there is no reason, and which has caused a very considerable inequality in assessment." The difference arises from Ailum being almost wholly irrigated by canal; Nalah, which lies high, is only so irrigated in bad years, when wells fail, and the canal must be had recourse to. The proportion of *moheeta* will be smallest where canal-irrigation preponderates most largely over well-irrigation, and where canal-irrigation prevails, the proportion of *moheeta* will depend on the ratio that *lift* bears to *flush* irrigation. If in

1866-67 there was more irrigation from the canal in Nalah, there was probably less from wells. In any case, the exceptional irrigation of a peculiar year cannot be taken as normal, or as indicating the ordinary conditions under which the outturn of rents, payable in kind must be estimated.

33. The results of assessment in these five pergunnahs give a net increase of Rs. 5,206:—

Pergunnah.	Old demand.	New demand at 50 per cent.	Increase.	Decrease.	Percentage.		Old rate on cultivation.	New rate on cultivation.
					Increase.	Decrease.		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs. a p.	Rs. a p.
Shikarpore, ...	1,06,052	1,03,301	...	2,751	...	2	2 6 7	2 2 1
Boorhanah, ...	75,017	69,846	...	5,171	...	6	2 2 7	1 15 8
Shamlee, ...	1,20,316	1,20,067	...	259	...	2	2 10 0	2 10 3
Kyranah, ...	49,571	52,307	2,736	...	5	...	1 11 2	1 8 10
Kandlah, ...	1,00,759	1,11,410	10,651	...	10	...	2 4 8	2 3 5
Total, ...	4,51,715	4,56,921	13,387	8,181	1	...	2 4 3	2 2 3

Remaining Pergunnahs.

34. There remain the five pergunnahs which at time of settlement were found in a more depressed condition: of these, two—Bugrah and Churtawul—are in the Moozuffernuggur Tehseel, and three—Thannah Bhawun, Jhinjanah, and Bedowlee—in the Tehseel of Shamlee. The comparative area of this tract is:—

Pergunnah.	Period of Settlement.	Total area.	Barren.	Revenue Free.	Culturable.	Fallow.	CULTIVATED.		Total.	Total assessable.
							Irrigated.	Unirrigated.		
Bugrah, ...	Former Settlement, ...	55,460	7,978	1,190	6,858	...	39,434	...	39,434	46,392
	Present, " ...	56,605	6,363	1,090	4,875	2,239	18,896	23,142	42,038	49,152
Churtawul, ...	Former, " ...	58,092	9,540	1,774	7,192	...	39,586	...	39,586	46,778
	Present, " ...	59,044	6,659	539	5,213	2,284	15,173	29,176	44,349	51,846
Thannah Bhawun, ...	Former, " ...	56,997	4,764	10,354	11,618	...	80,361	...	30,361	41,979
	Present, " ...	57,590	9,242	8,910	5,127	6,619	19,698	7,994	27,692	39,438
Jhinjanah, ...	Former, " ...	59,782	5,186	7,592	17,429	...	29,575	...	29,575	47,004
	Present, " ...	60,117	9,040	7,080	14,066	4,920	19,308	5,703	25,011	43,997
Bedowlee, ...	Former, " ...	54,005	7,662	3,925	17,611	...	24,807	...	24,807	42,418
	Present, " ...	55,616	11,101	3,425	14,987	5,559	14,068	6,476	20,544	41,090
Total, ...	Former, " ...	284,336	35,130	24,735	60,708	...	163,763*	...	163,763	224,471
	Present, " ...	288,972	42,405	21,044	44,368	21,621	87,143	72,491	159,634	225,523

Pergunnah Bugrah.

35. In Bugrah cultivation has extended from 39,434 to 42,038, being an increase of 2,604 acres, or 6·6 per cent. only. Of the former irrigated area we have no returns, but there is no reason to suppose that there has been much extension of irrigation. The assumed rental of the new settlement was Rs. 1,63,382 against Rs. 1,32,865 of the old; or Rs. 30,517, being equal to 23 per cent. increase. 44·9 per cent. of the cultivated area is irrigated. Mr. Martin, who assessed it, writes that he believed "the true interests of Government will be best secured by slightly relaxing the full amount of jumma derivable from the deduced revenue rates. This pergunnah has never been very prosperous, and until irrigation is more extended, I cannot see how it is to improve. In parts of this pergunnah the famine has so exhausted the zemindars as to make them in many instances absolutely helpless." He adds:—"Mr. Edwards, Collector, has made the following remarks on Bugrah:—'This is a very fairly prosperous pergunnah. I consider the best villages in it are Tutavee, Mundee, Mookundpore, Dundalee, and Khatowla. This last has a very slight jumma, and large profits are realized. The village of Peenah was formerly one of the best in the pergunnah, but it has latterly materially deteriorated; so much so, that a portion of its lands have been in the market, and fetched but little, whereas some years back nothing would induce the people to part with a foot of the soil. The village behaved very badly in the disturbances, and had to be punished more than once, but not so severely as to have permanently injured the

* Figures of former irrigated area not forthcoming.

mouzah. The people are turbulent, and many of them arrant thieves. Both Burwala and Hursolee are also fine villages with very extensive area. The former also behaved very badly in 1857. Kanownee may also be mentioned as a village of great capabilities. I cannot agree with Mr. Edwards in the above description, but rather with Mr. Lane, Deputy Collector, when, writing in 1861, he says: —‘I have seen little prosperity in the pergunnah; certainly the season has been singularly unfortunate, but at any time with few wells and no canal irrigation, it can never bear a heavy assessment.’ And again, ‘the great difficulty I had to contend with in this pergunnah was the depressed condition of the zemindars. They are only just recovering from the effects of the famine, which destroyed men and cattle. Take, for instance, the case of Sydpoora Khoord, a petty village close to Bugrah. The malgoozars are impoverished Syuds. They broke down so completely in 1268 F. S., that Rs. 870 had to be suspended. The soil is in parts sandy, in others there is good wheat land; no resident cultivators, only a few wretched hovels in which the Syuds live. The jumma was originally Rs. 270; at the last settlement it was raised to Rs. 667, which gave a rate on the malgoozaree acre of Rs. 1-1-5½. The past demand has been realized with the utmost difficulty. From the nikasees in good years we obtain an outturn of Rs. 1,057. Mr. Thornton’s circle rent-rates go up as high as 1,700 odd rupees. Hurdeean Singh, Raees of Bugrah, says the estate cannot bear a higher jumma than Rs. 450; the pergunnah officers propose a demand of Rs. 325. In consideration of the extreme poverty of the proprietors, and in the hopes that a light jumma would in the course of time bring them round again, I reduced the demand to below half assets got by the circle rent-rates, viz., to Rs. 400, which gives a rate on the cultivated area nearly 9 annas cheaper than in the conterminous village of Bugrah, with its large number of resident agriculturists and traders. I could not, under the circumstances, avoid this great inequality.’”

Mr. Cadell writes:—“The considerable fall in the assessment was hardly necessary, but many estates were at the time of settlement much depressed, owing to the drought.” How “depressed” they were from rebellion, drought, exodus of cultivators and sickness, none but the Settlement Officers of that day who saw and moved amongst them can conceive.

The old and new rental are as follows:—

Pergunnah.	Old.	New.	Old rent-rate on cultivation.	New rent-rate on cultivation.
	Rs.	Rs.	Rs a. p.	Rs. a. p.
Bugrah,	132,865	1,63,882	3 5 11	3 14 2

36. Of Churtawul, Mr. Colvin writes:—“Churtawul covers 92* square miles, and is bounded on the east by the Kalee Nuddee, on the west

Pergunnah Churtawul.

* 90·3 in Christian’s Census, page 110.

by Thannah Bhawun, on the south by Bugrah, and on the north by Rampore and Deobund, of the Saharunpore District. The Hindun runs from north to south through the western quarter. Between the Hindun and the Kalee Nuddee, the land is high but naturally fertile. Water is as a rule at a great depth. Masonry wells are scarce, and kutchha wells are only dug at a great expense, lasting for two years, or so. Except in bad rain years, cultivation is careful and abundant. The villages lie rather far apart, but are large and substantial. Tuggahs on the highland, and Rajpoots towards the Kalee Nuddee and Hindun, are the chief castes. Churthawul itself is a small agricultural town, once the residence of an *amil*, but now a mere overgrown village. On the west of the Hindun a rajbuha of the Eastern Jumna Canal runs from north to south, and the villages in its neighbourhood are, as usual, thriving and prosperous. One road runs from west to south-east, coming from Jellalabad and Thannah Bhawun, crossing the Hindun by an unbridged ford, and the Kalee Nuddee by a masonry bridge, and so leading to the Moozuffernuggur market. The Doab is particularly liable to malaria, and fever interferes severely with agricultural operations in September and October. The

population is 297 to the square mile, as against 414 in Christian's Census. The difference I attribute to the drought of 1860-61, which fell very heavily on a pergunnah so deficient in irrigation. The exodus from the Cis-Hindun villages was very general.

“ The balances have been reported on separately. Excepting the Kusbah, which has suffered from litigation and recent drought, Russolpore, which belongs to an impoverished Syud family, Syud Poorah, held by a colony of poor Syuds, and Bhumbela, over-assessed, there is no village which has suffered seriously during the recent settlement. The reductions now made are chiefly owing to the half-asset principle, though in a pergunnah so much dependent on the rains, I have been careful rather to fall below the mark. The Trans-Hindun villages seem to me to have been assessed at the last settlement in anticipation of the rajbaha, which was shortly afterwards run out. Several of them in consequence were straightened previous to the introduction of canal-water, and though they recovered rapidly and completely, any considerable increase, having been already anticipated, was at this settlement impossible.”

Mr. Cadell's remarks.

Mr. Cadell adds :—“ In this as in so many other pergunnahs in the district, the area under irrigation at last settlement cannot now be ascertained, but there can be little doubt that this tract has made considerable progress, and that the present assessment is most moderate. The great want of the pergunnah is water, and that is now at last likely to be soon supplied from the Deobund Branch, which, when completed, will entirely change the circumstances of this tract. There is at present no estate of the 36 eligible under the 80 per cent. rule, in which a moderate supply of canal water will increase the assets assumed at settlement by more than 20 per cent. ; and I therefore recommend that the present assessment be sanctioned as a temporary one, and that permanent settlement be delayed until canal-irrigation shall be developed, and the settlement shall be again revised.

“ *Adequacy of present Settlement considered.*—Although, however, there can be no accurate comparison of the irrigated areas of the present and former settlements, it is possible to compare the rates assumed by Mr. Thornton with those of the present settlement. Mr. Thornton's rent-rates for wet and dry rosli, which comprise nearly the whole of the land in this tract, were Rs. 4-7-0 and Rs. 2-7-1½, respectively. Those given by Mr. Colvin's assessment are about Rs. 3-12-0 wet and Rs. 1-14-0 dry. That these rates (equivalent to annas 10 and annas 5 per kutchha beegha) are extremely low is shown by the rates given in Appendix II. ; while those found in adjoining pergunnahs to the south and west confirm the conclusion to which a comparison of the settlement points, that they are needlessly low, and that the present assessment does not represent the half-asset value of the prosperous and greatly improved tract. A sudden enhancement was at the time of settlement undesirable ; for the once turbulent Rajpoots had hitherto been leniently dealt with ; but there seems to be no reason why the present light assessment should be made permanent.”

The cultivation of the last settlement was 39,586 ; of the revision, 44,349, an increase of 4,763, or 12·0 per cent. The assumed rentals of the two settlements were Rs. 1,00,631 and Rs. 1,22,514 respectively : an increase of Rs. 21,883, or 21·7 per cent. At the old average rate the increase in cultivation would yield 12,095 only. Irrigation occupies 34·2 per cent. of the cultivated area, and the Canal has caused an increase of irrigation of about 5,000 acres, to which much of the increased rental is due. The pergunnah at settlement was, like Bugrah, in a very depressed state. Population had fallen. The recent fallow amounted to 2,284 acres, or 4 per cent. of the assessable area. Mr. Martin says of it :—“ Pergunnah Churthawul, although it greatly resembles Bugrah, is, on the whole, more depressed.” A “sudden enhancement,” such as Mr. Cadell speaks of as “undesirable” at time of settlement, was, with a population reduced by nearly a half, eminently impracticable. Eight years later, when he saw it, things were mending ; but

in this, as in his remarks on the other pergunnahs, there is evidence that Mr. Cadell failed to realize the *status* at settlement. The rental of the two settlements is as follows :—

Pergunnah.	Old rental.	New rental.	Old rent-rate on cultivation.	New rent-rate on cultivation.
	Rs.	Rs.	Rs. a. p.	Rs. a. p.
Churthawul, ...	1,00,681	1,22,514	2 8 8	2 12 2

37. Thannah Bhawun, it has already been said, suffered exceptionally from the events of 1857. The exodus had been very large, and wide stretches of arable land were uncultivated. The drought had also fallen heavily on the pergunnah. It is described as follows :—“ Pergunnah Thannah Bhawun is bounded on the north by Gungoh and by

Pergunnah Thannah
Bhawun.

* Description of pergunnah.
† 90-1 in Christian's report on the census, page 110.

Rampore, both pergunnahs of the Saharunpore district; on the south by Pergunnahs Shamlee and Bugrah; on the east by Pergunnah Churthawul; and on the west by Pergunnah Jhinjana. It covers 88* square miles. It has altered its limits since Mr.

Thornton described it in the Saharunpore Settlement Report (para. 16), but the account there given of it is generally correct. Towards the west it is intersected by the Kirsunnee, a stream running here between high banks. Beyond the Kirsunnee lies the Eastern Jumna Canal. To the extreme west the soil is naturally good, but to the east of Kirsunnee, the land is high, and there is a paucity of wells. In these parts and towards the south of the pergunnah the land is open, rather thinly inhabited, and not thickly cultivated. About the canal, mangoe groves are frequent, population abundant, cultivation universal. The chief crop grown in the pergunnah is wheat, occupying 48 per cent. of the whole cultivated area. Rice is grown by a few villages, such as Yarpoor, Kadurpore, Janespore, and Ubeytah. The chief trees are, as usual, the keekur, sheeshum, and jamun. About the north-west, in the villages Ahmedpore, Khanpore, and one or two others, dhak jungle is prevalent. Large tracts of *oosur* lie on either side of the canal at intervals on its whole course, throughout the pergunnah. The

Caste of inhabitants.
† 555 in Christian's census, page 110. Difference probably due to mutiny, and exodus of 1860-61,—see paragraphs 3 and 8.

population† (405 to the square mile) is chiefly Rajpoot and Jat; but there is a good sprinkling of Pathans and Sheikhs, descendants of former maafedars.” And again,—“ the pergunnah in 1860-61 was in an abnormal state. The canal villages were growing wheat in unusually large quantities. In the other

villages cultivation was nearly confined to the vicinity of wells, but there too the better crops were being grown in unusual proportion, and the wells were being worked to an unusual amount. Hence I lowered the amount of two principal crops, wheat and maize, by one-fifth, and added the difference to bajra and churree. To this ratio thus obtained, I applied, as far as money-rents went, the average money-rents for the last 10 years, and to the other crops a set of estimates founded chiefly on local enquiry. I went over several files of summary suits, but in the first place I could rarely ascertain whether the land in question was irrigated or unirrigated, and very frequently the estimates themselves were disputed by the parties, and evidently excessive. The kham tehseel papers were of more assistance, as giving me a fair acre average outturn for each kind of crop—several villages in the Kheaooree circle having been held kham. The result was not, however, satisfactory. This process, which answered very well in pergunnahs assessed the following year, was injured in 1860-61 by the unusual state of the

Peculiar difficulties owing to abnormal cultivation in the famine year.

crops, and the undue abundance of the more remunerative, especially wheat. It will be understood that cultivation was confined to irrigated lands, and on them principally to the better crops. Hence, although one-fifth had been reduced from wheat and maize, the average of the better crops was evidently in excess. The *nikassees* could not help me, for although they showed the ratio of crops in ordinary years, they did not show them

classified by soils. Unwilling to adopt rates which seemed too high (the averages of crops on each soil and rates formed by me in Circle Ourungabad, besides the rates actually adopted, are given at the foot of this report), I turned to Mr. Thornton's Moozuffernuggur rates for the neighbouring circles of Bhynswal and Shamlee; and, after applying them to several villages, and comparing their results with the other processes subsequently detailed, I felt so satisfied with them as to adopt them, only reducing them to half-assets. These rates were applied to the total of each kind of soil for each circle, *i.e.*, the Bhynswal to the Ourungabad circle, and the Shamlee to the Kheaoree circle, giving respectively a circle demand of Rs. 22,257 and Rs. 33,938. This again, and the cultivated area of the circles were divided into each other, and gave an average rate by means of which I redistributed the circle jummas over the individual villages. The soil rates applied to each village were then compared with this jumma. An abstract of the *nikassees* was also made for five years of the last settlement. The rate given by the total of the area cultivated by crops paying in kind, and the value of these crops, as inserted in the *nikassees* was applied to the area cultivated with such crops in the khusrah; the area cultivated by crops paying money rents being multiplied by those rents, and the two results added together. This estimate was always low. The putwarees, I believe, in this district register accurately the kinds of crops grown; but the amount grown is quite untrustworthy. Similarly, the outturn of five years, according to the appraisal table in Statement I., appendix to Mr. Thornton's Moozuffernuggur Report, was substituted for the amount grown, as registered in the *nikassees*, and the rate thus obtained, applied as the rate obtained from the *nikassees* had been applied. This, in average villages, was very useful, giving a demand below which, without special reasons, I never suffered myself to fall, and often affording an index to the real capabilities of the village. In almost every village in the Kheaoree circle there was a good deal of land thrown out of cultivation by the drought of 1860-61, and by the disturbances of 1857-58. As a rule, I took into cultivation at the average cultivated rate of the circle all land in excess of the proportion borne by the circle, culturable, and recently abandoned of the last settlement. The *nikassees* gave me little aid, for they did not distinguish accurately between 'culturable' and 'recently abandoned.' So, too, in applying the soil rates to each village, the average amount of manured land *per well* in the circle was preserved for each village within it. This relieved the industrious, and took cognizance of the lazy. It will be seen from the miscellaneous remarks, that when I considered it necessary, I have departed to a large extent from the results of the rates, which were only *average*; but they have been the basis of my assessments." Cultivation was confined to irrigated lands, and on them principally to the better crops. Mr. Cadell, writing about 10 years after the effects of the famine had passed away, has but a little better account to give. He says:—"these figures are very remarkable, and, while they show the fertility of the cultivated area to the west of the river, they indicate other symptoms which are not so satisfactory—the enormous proportion of the so-called culturable waste, and the altogether unusual difference between the incidence of the assessment on the assessable and cultivated areas. The area entered barren, must, of course, be largely added to by the construction of every new canal and the completion of new means of communication; but the enormous proportion of old and new fallow can only be owing to the gradual falling out of cultivation of land which has been injured by over-irrigation. Indeed, the portion west of the Kirsunee appears to be deteriorating rather than improving, and it is entirely owing to the rise in prices, and the consequent rise in rents, that there was not a serious diminution in the Government demand." Decrease of population has possibly something to do with the present state of affairs. And again,—“Although I have recommended seven states for permanent settlement, as in every way eligible under the rules, there is grave reason to doubt whether it would not be better for the people that permanent settlement should be delayed. As I have already stated, these states are rather deteriorating than making progress; and so little do the people desire permanence, that the owners of only two out of the seven estates could

be persuaded by Mr. Martin to sign the agreements which bound them to pay their present assessments beyond the original limit of thirty years."

"*Tract to the east of the Kirsunee.*—To the east of the river lies a tract of few natural advantages; the soil is of fair quality, but the sinking of earthen wells is difficult and expensive; the cultivators, too, are for the most part Rajpoots, whose progress has not been rapid. It might have been thought that this was the tract in which of all others canal-water would have been most useful and was most certain to be given; but although the once frequent earthen wells to the west of the river have long since been closed by the canal, and although the neighbourhood to the east was well supplied with masonry wells, yet the Canal Department has carefully avoided the tract which most required its aid, and has lavished canal-water in needless profusion over a fertile country which hardly wanted help. The consequence is that, while *reh* and swamp are doing much injury beyond the Kirsunee, and while the rajbaha to the east irrigates large tracts fully secured by masonry wells, the dry and arid tract in the middle of the pergunnah has been left without that share of canal-irrigation which it so much requires."

38. Of the whole area cultivated, in the year of famine 71·1 per cent. were irrigated. But of the whole assessable area, 16 per cent., or 6,619 acres were fallow. The old and new rentals were as follows; but the incident of the rent-rate in column 4 is purely fictitious, owing to the large amount of fallow :—

Old rental.	New rental.	Old rent-rate on cultivation.	New rent-rate on cultivation.
Rs.	Rs.	Rs. a p.	Rs. a. p.
86,529	1,14,162	2 13 7	4 1 11

39. Jhinjanah, the next pergunnah, was even more reduced. Mr. Colvin describes it thus :—"This pergunnah lies to the west of Thannah Bhawun and east of Bedowlee, and is bordered by Shamlee on the south, and Gungoh, of the Saharunpore District, on the north. In point of cultivation and natural fertility it varies greatly. The villages in the north-west corner are imperfectly cultivated, and thick with high dhāk jungle, but the soil is naturally fair, and up to the average of the district. In the north is a small clump of high-lying estates, with sandy light soil, and water at a great depth. Towards the south the cultivation improves, the villages grow larger, population is more abundant, and dhāk jungle grows infrequent. In the south-east cultivation is very high, and as good as any I have seen in the district; while in the opposite south-west corner there is scarcely a blade of wheat, or an inhabited village. This corner, lying under Bedowlee, suffered from similar causes. The chief crop is wheat (47 per cent. of the cultivated area); jowar occupies 18 per cent, and the other crops are grown in small but equal proportions. The only town is Jhinjanah, situated high above the plain, and overlooking to the north-west the ill-cultivated plains that stretch across the Bedowlee, and to the south-east the mango groves, close clustering villages, and wheat fields which mark the neighbourhood of the Eastern Jumna Canal. High as the town lies, it suffered severely from cholera in 1861. The largest village perhaps is Oon—one of many admirable examples of Jât industry and the vigour of a village community.

Pergunnah Jhinjanah.

"The chief castes are Jâts and Goojurs; there are also some Pathans, Rors, and Sheikhs. The pergunnah map accompanying will show the distribution of castes. The area is 94 * square miles, and the population 306 to the square mile. There are but three zemindaree villages, all lying in the small ill-favored group spoken of in the last paragraph. The bulk of the villages is *bhyachara*; there are markets at Jhinjanna and Gurhee Hussunpore,

chiefly for agricultural produce. The Meerut-Kurnal Road runs through the south-western corner, and tops the Jhinjanah market, which is also one of the markets for

Castes, area, &c.
* As against 93·2 and 409, page 110, Christian's report on the census. Reduction in population attributable to results of mutiny and drought.

the Bedowlee Pergunnah. This road is at present the only high road in the pergunnah ; but a new road, the line of which is traced in the accompanying map, is about to be made to Thannah Bhawun. The chief traffic, however (sugar), goes to Shamlee. A small stream (the Katha) runs through the pergunnah, and the Eastern Jumna Canal on the east side sends out three rajbhas into it; of which, however, the Boontah Rajbha is below the level of the country, and does comparatively little good in this pergunnah.

“ The former assessment had on the whole worked well. The villages on the west, or Bedowlee side of the Katha, were rather over-assessed, but the others were doing well, and were populous. The rebellion, and the drought of 1860 had told severely on the over-assessed villages, and to these chiefly relief was confined. Reductions due to the half-asset principle were necessary in some other villages, but beyond that, only in the villages above mentioned. The average canal-irrigation, according to the canal records at the time of the last settlement, was 1,151 acres, as against 9 villages, and at the present settlement 3,658, as against 16 villages. The canal villages were most prosperous.”

In this pergunnah, as in Thannah Bhawun, the cultivated area had not increased. The area at the last settlement was 29,575 ; at the present, including fallow land, 27,931.

The rentals of the two settlements in this pergunnah were as follows :—

Pergunnah.	Old rental.	New rental.	Old rent-rate on cultivation.	New rent-rate on cultivation.
			Rs. a. p.	Rs. a. p.
Jhinjanah, ...	97,000	1,18,296	8 4 6	4 8 7

The entry in column 5 is, for the reasons given under Thannah Bhawun, unreliable.

Pergunnah Bedowlee.

40. The circumstances of Bidowlee were altogether peculiar. They are detailed at considerable length in pages 120 and 128 of the volume of Reports. The settlement of the pergunnah was professedly light: and there were no data whatever to guide the Settlement Officer as to its probable assets during the next 30 years. It had been greatly over-assessed: it had suffered in the Mutiny: it had suffered more in the famine of 1860: not one-half of the assessable area was under cultivation: the population were chiefly Goojurs; but an energetic Syud landholder, recently returned to the pergunnah, was making efforts to induce Bowreas to colonise, and to introduce canal irrigation. The assessment cannot be judged by the ordinary tests, and it is probably now considerably below half-assets. But the pergunnah is improving, and a recent Collector last year laid before Government his opinion of its present state. He writes:—“ It is clear, then, to my mind that there has been a genuine improvement in the assets, and a still more perceptible improvement in the future prospects of the Pergunnah. (Proceedings, North-Western Provinces, Revenue Department, No. 87, June 8, 1872). The engagements are at present for 20 years, but the Government in the correspondence above alluded to, have remarked:—“ It will be a question, when the Settlement generally comes up for sanction, whether the period should not be the same for Bedowlee as for the rest of the district.” The Board would include this Pergunnah in their recommendation of a 30 years Settlement, (of which period only 18 years have now to run.) That Bedowlee is lightly assessed is not denied, but it was purposely and wisely so assessed.

41. The fiscal result of the two settlements in these five pergunnahs, has then been :— Fiscal results in 5 Pergunnahs.

Pergunnah.	Old demand.	New demand at 50 per cent.	Increase.	Decrease.	Old rate on cultivation.	New rate on cultivation.
	Rs.	Rs.	Rs.	Rs.	Rs. a. p.	Rs. a. p.
Bugrah, ...	86,862	81,691	...	4,671	2 3 0	1 15 11
Churtawul, ...	65,410	61,257	...	4,153	1 10 5	1 6 1
Thanah Bhawun, ...	56,244	57,081	837	...	1 13 7	2 0 11
Jhinjhanah, ...	63,056	55,698	...	7,358	2 2 1	2 4 3
Bidowlee, ...	37,905	29,125	...	8,780	1 8 5	1 6 8
Total, ...	3,08,977	2,84,852	837	24,962	1 14 2	1 12 6

42. The former and present assessments of the whole of the ten pergunnahs are as follows :—

Former demand.	New demand at 50 per cent.	Decrease.
Rs.	Rs.	Rs.
7,60,692	7,41,773	18,919

The settlement has now stood the test of a period ranging from eight to eleven years, and experience has shew it to be very fair and equitable. There may be inequalities in the assessment of particular villages, but as a whole the pressure of the settlement is equal. The Board would recommend that it be sanctioned for a period of 30 years, or from 1861 to 1891.

I have the honour to be,

SIR,

Your most obedient servant,

A. COLVIN,

Secretary to the Board of Revenue, N.-W. P.

APPENDIX.

Statement showing the Classification of Soils at present Settlement with the several Rent-Rates assumed per acre.

Division.	District.	Pergunnah.	Circle.	DESCRIPTION OF SOIL.										REMARKS.
				Meerut.		Rooslee.		Dahur.		Bhoor.				
				Irrigated.	Unirrigated.	Irrigated.	Unirrigated.	Irrigated.	Unirrigated.	Irrigated.	Unirrigated.			
MEERUT.	MOOZUFFERNUGUR.	BIDOULEE,	Chuck Bidoulee, ...	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	The rent-rates for Pergunnah recently subjected to further revision of Settlement, are not included in this statement. The eastern Pergunnahs of the District, Khatouli, which appears in the other Appendices, have not been approved yet.	
			" Yahyapoor, ...	2 15 4	...	2 14 4	1 11 2	2 13 8	1 14 5	2 6 5	1 8 0			
			" Toda, ...	6 10 7	...	3 2 3	2 5 3	3 8 3	3 10 2	2 0 7	1 8 8			
		JHINJHAKA.	" Fukhumpoor, ...	4 3 7	2 11 0	2 12 9	2 4 4	3 2 2	2 15 3	1 13 8	1 8 2			
			" Yahyapoor, ...	3 2 3	...	3 1 3	1 12 10	3 0 6	2 0 3	2 8 10	1 9 6			
			" Chowndahera, ...	5 15 7	...	3 1 6	2 2 0	3 1 6	2 13 5	2 8 10	1 8 11			
		KYRANAH,	" Toda, ...	5 15 10	...	2 6 0	1 12 4	2 10 3	2 12 3	1 8 7	1 2 9			
			" Kheasree, ...	5 6 3	4 10 7	3 8 2	2 8 1	2 14 5	2 2 7	1 8 5	1 7 0			
			" Bhynswal, ...	7 8 0	...	3 0 9	2 1 1	3 1 3	1 15 6	1 10 3	1 4 4			
		SHAMLEE,	" Kyrana, ...	6 0 0	5 0 0	4 0 0	2 12 0	2 8 4	2 0 4	1 15 0	1 13 10			
			" Shamlee, ...	7 3 0	6 3 6	6 0 0	4 2 4	3 13 11	2 14 2	2 0 6	1 8 0			
			" Ranamuzrah, ...	5 9 8	3 14 4	3 0 6	2 11 4	2 8 4	2 0 4	1 15 0	1 0 0			
		THANAH BRAWN,	" Punjeet, ...	7 4 0	6 0 0	4 12 0	3 12 0	3 4 4	2 2 0	1 15 0	1 13 10			
			" Shamlee, ...	7 3 0	6 3 6	6 0 0	4 2 4	3 13 11	2 14 2	2 0 6	1 8 0			
			" Bhynswal, ...	8 4 0	...	4 12 0	3 8 0	7 8 0	5 4 0	2 3 0	1 11 2			
		KANDHIA,	" Buntikheru, ...	7 0 0	6 0 0	4 11 0	3 6 0	3 8 0	2 12 0	1 12 0	1 4 0			
			" Koodanah, ...	8 11 1	4 6 10	6 6 6	4 12 0	4 6 6	3 9 4	3 15 6	1 14 10			
			" Bhynswal, ...	9 7 4	3 4 3	3 13 5	2 9 8	3 14 2	2 7 8	2 1 1	1 9 8			
		BOORHANA,	" Kheasree, ...	5 6 3	4 10 7	3 8 2	2 8 1	2 14 5	2 2 7	2 8 5	1 7 0			
			" Kairanah Bangur, ...	6 0 0	5 0 0	4 0 0	2 12 0	2 8 4	2 0 4	1 15 0	1 13 10			
			" Shamlee, ...	7 3 0	6 3 6	6 0 0	4 2 4	3 13 11	2 14 2	2 0 6	1 8 0			
		SHIKARPOOR.	" Koodanah, ...	8 11 1	4 6 10	6 6 6	4 12 0	4 6 6	3 9 4	3 15 6	1 14 10			
			" Purasolee, ...	6 12 0	5 14 0	3 14 0	2 12 0	3 8 0	2 8 0	1 8 0	1 4 0			
			" Kandhla, ...	8 8 0	6 6 0	6 12 0	5 2 0	6 0 0	4 0 0	3 15 6	1 14 10			
		CHURTHAWAL.	" Koodanah, ...	6 8 3	3 5 1	4 3 1	2 9 7	3 4 10	2 11 0	2 15 7	1 7 2			
			" Shoron, ...	5 8 0	4 12 9	4 5 4	2 7 2	2 6 5	1 13 6	1 8 0	1 2 11			
			" Khatalee, ...	4 3 11	2 12 10	2 15 1	1 13 10	1 15 0	1 9 3	2 14 7	1 6 8			
		BUGRAH,...	" Shoron, ...	5 8 0	4 12 9	4 5 4	2 7 2	2 6 5	1 13 6	1 8 0	1 2 11			
			" Koodanah, ...	6 8 3	3 5 1	4 3 0	2 9 8	3 4 10	2 11 0	2 15 7	1 7 2			
			" Poorbalian, ...	4 8 0	2 4 0	2 12 0	2 4 0	...	1 15 9	2 12 0	1 3 6			
		GORDHAN-POOR.	" Budhaee, ...	4 4 2	3 14 11	2 6 7	1 15 2	1 13 3	1 11 3	2 4 9	1 9 5			
			" Moosuffernugur, ...	4 8 6	4 4 8	3 6 0	2 3 4	3 0 0	2 0 3	1 7 11	1 7 0			
			" Jukhwala, ...	4 8 5	3 15 9	3 2 11	2 2 6	2 3 2	1 12 9	2 10 4	1 11 0			
		GORDHAN-POOR.	" Bugra, ...	4 5 4	3 4 5	3 6 0	1 14 9	...	1 11 6	...	1 7 0			
			" Kheasree, ...	5 6 3	4 10 7	3 8 2	2 8 1	2 14 5	2 2 7	1 8 5	1 7 0			
			" Churthawal, ...	5 8 0	4 12 9	4 5 2	2 7 2	2 6 5	1 13 6	1 14 0	1 2 11			
		GORDHAN-POOR.	" Bugra, ...	5 6 8	4 1 7	4 3 7	2 6 2	2 14 5	2 2 4	3 13 5	1 12 9			
			" Churthawal, ...	6 14 0	6 0 0	5 6 6	3 0 11	3 0 0	2 4 10	...	1 7 8			
			" Moosuffernugur, ...	5 10 7	5 5 10	4 3 7	2 12 2	3 12 0	2 8 3	...	1 12 9			
		GORDHAN-POOR.	" Koodanah, ...	8 1 7	4 2 5	5 3 10	3 4 0	4 2 1	3 5 9	3 11 6	1 13 0			
			" Chukwaha, ...	6 0 6	4 15 8	3 15 7	2 11 1	2 12 2	2 3 11	3 4 11	2 11 1			
			" Poorbalian, ...	5 10 0	...	3 7 0	2 13 0	3 8 11	2 7 8	...	1 8 4			
		GORDHAN-POOR.	" Shoron, ...	6 14 0	5 14 2	5 6 8	3 1 0	3 0 0	2 8 10	1 14 0	1 7 8			
			" Gordhanpoor, ...	...	3 4 0	...	2 5 8	...	2 1 3	...	2 0 8		
			" Rizkullapoor, ...	...	2 9 8	...	1 14 2	...	1 10 3	...	1 8 11		

REPORT

ON THE

PERMANENT SETTLEMENT

OF

THE WESTERN PERGUNNAHS

OF THE

MOOZUFFERNUGGUR DISTRICT.

By A. CADELL, Esq., C.S.

1.—PERGUNNAH KANDHLAH.

Classified Statement of Area of Khandlah at Settlement.

Kind of soil.			Irrigated.	Dry.	Total.	Percentage to cultivated area.
Meesan,	...	...	11,213	20	11,233	22
Roslee,	...	...	24,887	10,099	34,986	68
Dakur,	...	...	3,499	491	3,990	8
Bhoor,	...	...	26	987	1,013	2
Total,			39,625	11,597	51,222	

Culturable waste, 5,414. New fallow, 707.

				Rs.
Former Jumma,	...	...	...	1,00,679
Present Jumma,	...	...	...	1,13,865
Increase,	..	...	...	13,196

THE Pergunnah of Kandhlah forms the south-west corner of the Moozuffernuggur District. It is bounded on the east by Boorhanah, on the north by Shamlee, on the south by Barout and Chuprowlee of Meerut, and on the west by Kairanah and the Jumma. Only five townships of the pergunnah, however, adjoin the river, and as there is no khadir to speak of, and the bank is comparatively steep, the average of the pergunnah is but little affected. A greater influence is exerted by the River Kirsanee, which runs through the pergunnah from north to south, and cuts off from the western portion about a third of the whole area. The land on either side of this stream is to the distance of about half a mile poor and uneven, and while the estates on the Kirsanee have on the level upland land quite equal to the high average of the pergunnah, the fields on the slope are unquestionably inferior, and even when Jat industry has made them tolerably productive, the difference is sufficient to bring down considerably the average of all estates thus situated. A still more important effect of the Kirsanee upon the cultivation of the two portions of the pergunnah is that it has hitherto prevented the extension of canal irrigation to the eastern portion, and in this way, while the western portion receives a much larger share of canal irrigation than is desirable, the eastern portion, especially to the south, is comparatively dry and unwatered.

2. With the exception of the land on the slope, the soil of Kandhlah is throughout excellent. East of the Kirsanee some sandy fields are recorded, and in the valley of the river the efflorescence "reh" has injured a few hundred acres on the lower level. Towards the Jumna too, the land is inferior to other portions of the tract, but it is only slightly less fertile than the soil to the east, which is in natural productiveness equal to any in the district. Water is near the surface, and earthen wells were in former years generally dug, but the low water-rates charged by the Canal Department have greatly reduced the area of well irrigation. Indeed a large proportion of the canal water supplied to this pergunnah has merely taken the place of well irrigation, and

in the Jat villages the indirect revenue due to the canal must be extremely small. In the Goojur estates, however, the effect of the canal has been more marked, and many of the Goojur villages in the pergunnah are now little behind their Jat neighbours.

3. This variety of caste and of circumstances connected with canal irrigation renders a further sub-division of the pergunnah possible, and the Trans-Kirsanee portion of Kandhlah might be divided generally as follows :—

1st, or Kandhlah Circle.—The Jat neighbourhood to the south and east on either side of the canal.

2nd, or Shamlee Circle.—The Goojur neighbourhood to the north and east, which has long had the advantage of flush irrigation, and is situated on either side of the canal.

3rd Circle.—The Goojur estates to the west adjoining Kairanah and the Jumna, to which canal irrigation has been more recently extended.

There are of course in these tracts other castes of cultivators, but those which I have named are by far the most numerous, and rule the character of the cultivation. In a similar way the Cis-Kirsanee portion may be roughly divided into the—

1st, or Northern Circle.—With Jat communities and more or less plentiful irrigation.

2nd, or Southern Circle.—Held mainly by Rajpoots, and with a sandy substratum, which renders the sinking of earthen wells more difficult and expensive.

4. In assessing this pergunnah Mr. Colvin departed from the system of his predecessors, Sir Henry Elliott and Mr. Plowden, and adopted that which had been used so much in the north of this district and in Saharunpore, of assessing tracts by assuming or working out rates on a variety of soils not known to the people, and which in no way rule the rent rates. Sir Henry Elliott, coming up from the south, adhered to the simple and effective method in general use among the people in fixing the rent-rates on irrigated and unirrigated land. Mr. Thornton, on the other hand, coming from the north, where rents in kind were very general, and money rents almost unknown, assessed on wet and dry, meesan or manured land, roslee or loam, dakur or firm clay, and bhoor or sand. To the east of the district Sir Henry Elliott carried the ultra-simplicity of his method farther north than was perhaps advisable; in the west, Mr. Colvin, coming further south than Mr. Thornton had done, brought the more cumbrous system to a pergunnah in which it is certain that the simple one would have worked much better. But Mr. Colvin was not satisfied with Mr. Thornton's system, and introduced what he held to be improvements. He writes in his Shamlee report :—“In this pergunnah I first adopted a plan formerly pursued by Mr. Thornton, but which, through a want of experience and due appreciation of the nicer points of assessment, I had hitherto only partially carried out. Distinction was in Shamlee first made between land actually irrigated in the year of measurement, land not irrigated in that year, but capable of and in other years receiving irrigation, and *bonâ fide* unirrigated land. The second and first kinds had hitherto been classed together, and an offset made against the average assumed to fall into the second class. Now, however, they were carefully distinguished. Irrigated rates were applied only to the area irrigated in the measurement year, and the two other classes were assessed at the unirrigated rates. The object in assessment being to ascertain the outturn of one year, irrigated rates applied to land unirrigated in the year of measurement would have assumed a greater average of better crops and better kinds of crops than actually was the case. When this second class (moheetah) was larger than could be fairly accounted for and above the circle average, I summarily included a part of each kind in the irrigated area. Similarly on the same principle manured land was divided into manured the year of measurement, and manured in previous years, or for next year's crop. On the first only were manured rates laid, the rest being classed as roslee.”

3. Now to this system it may be objected that the object of assessment is not to discover the outturn of the measurement year, but the income of an average year, and the attainment of this object is not facilitated by the assessing Officer fixing his attention on one year alone. The safeguards too, which are mentioned, are admirable in theory, but it is very difficult to apply them, and the result is that the system detailed above, although worked with great care, has the defect which might have been looked for—inequality. Another peculiarity, which is worth noticing, is that the system is *not* Mr. Thornton's, and that, in adopting these "nicer points," Mr. Colvin fell away from the system of his predecessor.

6. Mr. Thornton describes his method in this respect in the 7th paragraph of his report:—"It is not that land alone which is actually irrigated in the year of measurement which ought to be put down as such. The rubbee crop of the past year is succeeded by khurreef in the present, and it is not customary to water the khurreef, so that of the land round a well which is all of it watered in the course of two years only, one-half is irrigated in either one year. Both have been treated by me as irrigated land, though in the khusrah and early papers a distinction is preserved in using the name of 'chahee' for the one and 'moheetah chah' for the other. In estimating the average rent-rate, the produce of the latter is entered as if the land were unirrigated, and is then added to the produce of the former, after which the *average of the two* is taken as the uniform rate of the whole, and in subsequent papers the distinction is dropped." The system thus explained is of course that followed by the people when fixing rates among themselves. Wet rates are charged upon land which is ordinarily irrigated in rotation, and Mr. Colvin forgot, when diverging from the method of his predecessor, that although he might, as his system required, summarily raise the proportion of irrigated land to the circle average, no attempt was made to secure entries which would represent the ordinary state of the tract, not the circumstances during a single and possibly very exceptional year.

7. I have entered at considerable length into this point, because the area entered as irrigated is of such paramount importance when it has to be decided, first of all, whether the assessment is generally adequate, and, in the second place, whether the assets are likely to be substantially increased within twenty years owing to canal irrigation. In coming to a conclusion on the latter head, I have taken the moheetah from the dry area and classed it with the irrigated, and have considered whether the increase of canal irrigation promised by the Canal Department will involve an increase to the assets of the estate to the extent of 20 per cent.; and, in considering the effect of the increased canal irrigation promised, it has been necessary to keep in mind that irrigation affects the value of a larger area than that which is watered every year, and that it may be assumed with safety that if water from the canal be supplied in sufficient quantity to irrigate 100 acres every year, and if there be no reason such as extreme poverty of soil or unevenness of ground to prevent the extension of irrigation, at least 150 acres will be ordinarily irrigated, and will command wet rates. But in availing myself of the information supplied by the Canal Department, I have allowed myself very considerable latitude, as there can be little doubt that the very modest proposals regarding the eastern portions at least of this pergunnah will before long be very largely exceeded.

8. But in order to show more clearly the method which I have followed, it is best that I should show in detail the circumstances of the assessment in one circle, and the recommendations with reference to Permanent Settlement which have been made regarding it.

The Kandhlah Circle is situated on either side of the Eastern Jumna Canal; it adjoins on the south the Pergunnah of Chupprolee in Meerut, and being separated from the less fertile land on the Jumna by the adjoining circle of Kairanah, and the reh-affected land to the north being included in the Shamlee Circle, the land of this

circle is, with the exception of a few hundred acres near the Kirsanee, throughout of first class quality, and is on the whole superior to any similar tract in the district excepting perhaps the immediate neighbourhood of Shikarpore and the equally fine circle which lies round Bhainsee in Khutowlee. The assessable area in acres of this circle is as follows :—

Total assessable area.	Old fallow.	New fallow.	Total area cultivated.	Irrigated.	Irrigable (moheetah).	Total irrigable.	Unirrigated.	
							Ordinary land.	Sand.
20,675	1,561	148	18,966	13,376	3,456	16,832	1,971	163

9. In the whole circle “moheetah” thus amounts to about 20 per cent. of the area capable of irrigation, and the whole area to which dry rates have been applied is little less than 30 per cent. of the cultivated area of the circle, whereas not more than 10 per cent. can be really dry. There can indeed be little doubt that this distinction cannot be trusted, and it is impossible to correct it in detail; for when the khusras were compiled, no such distinction was contemplated, and the entry of moheetah was only made in the total, the moheetah area being taken, it would appear, from the hurriedly-prepared notes of the Ameens, so that on this very important point the information obtained was of a very unsatisfactory kind. To show this more clearly I give the entries regarding irrigation in the two adjoining estates of Ailum and Nalah, the former lying to the east and the latter to the west of the canal :—

Ailum.					Nalah.				
Wet.	Moheetah.	Total irrigable.	Dry.	Total.	Wet.	Moheetah.	Total irrigable.	Dry.	Total.
1,361	181	1,492	280	1,772	1,028	575	1,603	104	1,707

In the former township there are only 9 per cent. of the irrigable area entered moheetah, in the latter no less than 36—a difference in proportion for which there is no reason, and which has caused a very considerable inequality in assessment. In Nalah 402 acres are entered as irrigable from wells, and as there are 24 runs from masonry wells and earthen wells are easily made, this area is, even if there were no canal, perfectly secure. The rest of the irrigable area depends upon the canal, which, when irrigation is required, waters as in 1866-67 over 1,200 acres. Had the khusras therefore been compiled in that year, the whole area nearly would have been entered wet; while if Settlement operations had been carried on on Mr. Colvin's system in 1867-68, only 313 acres would have been entered as irrigated from the canal. The average area under canal irrigation in five years is 791 acres, which would give, according to the proportion which is generally found to be pretty accurate, 1,187 acres ordinarily irrigated from the canal.

10. The very important error regarding the extent of irrigation in Nalah has led to the assessment of that estate at a rate considerably lower than that applied to Ailum. This latter village was assessed at the following rates :—On cultivated area, Rs. 3-6-9; on assessable area, Rs. 3- -9; while those of Nalah are Rs. 3-1-5 and Rs. 2-14-4½ respectively. In Nalah indeed, as practically in Ailum, the old jumma being confirmed by the result of the application of the soil rates to the erroneous areas, was simply

retained. Now this jumma of Rs. 5,272 was fixed by Mr. Glyn 30 years before, and Sir Henry Elliot was decidedly of opinion that the village was under-assessed, and suggested as a moderate assessment Rs. 5,953 ; so that the old jumma, which was too favourable to the estate, should not be accepted as a guide.

11. To pass from single villages to the circle. Of the total area irrigable 2,503 acres are watered from wells and are perfectly secure, as the masonry wells alone would suffice for the irrigation of double that area. Deducting the area irrigated from wells, there are left 14,329 acres dependent on the canal. Now the irrigation in this tract has for a long time been fully developed, and there can be no injustice to the Settlement papers in testing the correctness of this area by the statistics of the five years preceding the recent famine, which years have been selected because the statistics were more easily ascertainable, and because there was during that period no season of drought to increase exceptionally the irrigated area, and no reason, such as the progress of Settlement operations, to induce the people to conceal the capabilities of the tract. The canal irrigation during the five years from 1863-4 to 1867-8, both inclusive, has been as follows :—

1863-4	...	9,019
1864-5	...	12,460
1865-6	...	9,079
1866-7	...	15,273
1867-8	...	8,241
5		<u>54,072</u>

Average of five years ... 10,814

This average would give, according to the proportion which I have assumed, over 16,000 acres ordinarily irrigated in rotation, and it is to this area that wet rates ought to be applied. There can indeed be little doubt that except a little land on the slope there is no dry land in this circle, and except along the river dry rates are almost unknown.

12. From what I have stated it will, I think, be apparent that, in estimating the probable increase to the assets due to canal irrigation, it is necessary to include all the moheetah under-irrigated, and to this extent to alter the areas entered in the No. II. Statements. This necessary change will make it difficult to estimate according to Mr. Colvin's system, with any approach to accuracy, the sufficiency or otherwise of the assessments, which were based on rates framed for the various soils and with reference to the irrigation of only one particular year. The calculations too, which led to the fixation of these rates, are nowhere given, and the fact that the meesan or manured land has been treated in a method similar to that which has been applied to irrigation, renders the difficulty of testing Mr. Colvin's assessments by his own method almost insuperable. I have therefore on all these grounds roughly tested the assessments by the assumed rates of Rs. 1-4-0 per kucha beegah, or Rs. 7-8-0 per acre, on irrigated land, and annas 10 per kucha beegah, or Rs. 3-12-0 per acre, on dry. These rates are, I think, fully justified by the rent-rates of the pergunnah and circle given in Appendix II.

13. The result of this scrutiny is that the following estates, of those in this circle eligible under the 80 per cent. rule for Permanent Settlement, comply with all the conditions which have been laid down :—

14. Of these estates Nalah alone has been excepted on account of irrigation. In this estate 697 acres were rated dry, and the irrigation of this area will add, or rather has added, 20 per cent. on the assumed assets to the value of the estate. In Nalah too the under-assessment was due, I believe, entirely to the method of assessing on the basis of the irrigation of a single year, and in no degree to any fraud on the part of the Jat owners, who, if assessed in accordance with their own rent-rolls for the years preceding the drought, would have to pay a heavier rate of assessment than that of any village in this splendid circle.

The other estates, which have been excepted, are owned almost without exception by Buneas and Sheihs, who have been treated with a leniency which they in no way extend to their tenants, and although these estates are eligible under the rules for Permanent Settlement, I feel bound to recommend that they be excluded.

15. All these estates are on the level upland, and including as they do the fertile Kandhlah township, give an average of capability as high as that of the much more highly assessed Jat townships. The difference of treatment is partly due to the excessive consideration which has been shown to the Sheikhs and Moguls of Kandhlah, and partly no doubt to the exertions of the proprietors in procuring favourable khusras. The extent of irrigation was so obvious that few attempts were made to conceal it; and the case of Shahpore, in which estate, easily irrigable throughout the entire area, only 43 per cent. has been entered irrigated and all the rest moheetah, is exceptional, and it is clear that the Bunea owners wisely and with much success devoted all their energies to keep down the area entered as meesan or manured; the result has been that this most valuable soil of all bears only a proportion of 8 per cent. to the cultivated area in Aldi and Shahpore instead of 26 per cent., the proportion in the fully assessed circle; or, to take another view of the matter, the meesan area entered in Aldi and Shahpore is not more than two-thirds of the average area under cane, cotton, and moonjee, crops which are invariably grown on manured land.

16. Appendix No. I. shows how high the rent-rates in this circle are, and I need not now do more than look at the assessment of the chief estate of all—Kandhlah. The average money rent in this estate is Rs. 1-13-4 per kucha beegah, or Rs. 11 per acre; but what is more important is, that the average fixed grain rent-rate charged upon 784 acres, including much outlying land and little of the best which is farmed by the owners or let on the batai system, is over 41 seers of wheat, which at 33 seers to the rupee, the average rate of 25 years preceding Mr. Colvin's Settlement, would have given an all-round money rent-rate of Rs. 1-4-0 per kucha beegah, or Rs. 7-8-0 per acre. This rate, which is now looked upon as a very moderate one, would give, in place of an assessment of Rs. 11,800, one of over Rs. 19,000, and there can be little doubt that the present assessment is little more than 25 per cent. of the assets of the cultivated area, and indeed this estimate of the value of the estate is in a great measure confirmed by the rent-rolls themselves. Although then it was deemed advisable to show very great consideration to the Sheikhs and Moguls of Kandhlah, and although it was inexpedient to raise the former assessment all at once to the level of the circle, I hold that it would be as unjustifiable to confirm the present very favourable terms absolutely as it would be to reward the precautions of the Buneas by a Permanent Settlement at the present rates.

17. I have gone at great length into the details of the assessment of the Kandhlah circle, in order that I might show with clearness the method which I have followed. I now proceed to show more rapidly the results at which I have arrived in other circles, and would refer for details to my notes regarding each estate.

18. The Shamlee Circle lies immediately to the north of that of Kandhlah, and differs from it chiefly in there being more rice, and in the fact that the cultivators are

chiefly Goojurs. The estates in this circle, which, dealt with in a manner similar to that which has been fully explained regarding Kandhlah, appear to me to comply with all the conditions which have been laid down, are :—

	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate on assessable area.	Rate on cultivated area.	
							Rs.	R. A. P.	Rs. A. P.	
1. Biramkhera, Pati Ramdut ...	241	697	18	181	181	...	602	3 0 11	3 5 2	Goojur brotherhood.
2. Biramkhera, Pati Lada, ...	98	81	1	87	87	...	273	3 1 7	3 2 4	Ditto.
3. Rusoolpoor ...	542	391	16	375	321	54	1,051	2 11 0	2 12 10	Ditto. Land slopes towards river.
4. Silpa ...	869	611	114	497	198	399	1,244	2 0 7	2 8 1	On Kirsanee.
5. Sherpoor (maafes), ...	844	229	20	209	147	62	571	2 7 10	2 11 8	Jat brotherhood.
6. Lahaoripoor ...	297	249	16	233	233	...	679	2 11 8	2 14 8	Goojur brotherhood.
Total ...	2,386	1,765	183	1,582	1,167	415	4,420	2 7 10	2 12 8	

The remaining eight estates of those eligible under the 80 per cent. rule, I would for the present exclude, as the assessment has, for various reasons, been fixed at a rate considerably lower than that borne by exactly similar estates in the neighbourhood :—

	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate on assessable area.	Rate on cultivated area.
							Rs.	Rs. A. P.	Rs. A. P.
1. Pinjokhra ...	746	609	34	575	575	...	1,578	2 9 5	2 11 11
2. Jasalah ...	1,057	981	15	966	947	19	2,500	2 8 9	2 9 5
3. Chuk Duma Kheri ...	297	271	15	233	332	23	500	1 13 6	1 15 3
4. Salah Kheree ...	233	204	16	188	153	35	350	1 11 5	1 13 9
5. Fazailpoor Khalisah ...	564	539	9	530	530	...	1,000	1 13 10	1 14 5
6. Fazailpoor Muzbitah ...	344	296	3	293	293	...	594	1 15 8	2 0 0
7. Khandraoli, Pati Musalmanan ...	1,039	907	149	758	758	...	2,000	2 8 3	2 10 3
8. Khandraoli, Pati Hinduan ...	1,016	816	35	781	781	...	2,222	2 11 7	2 13 6
Total ...	5,326	4,623	276	4,347	4,270	77	10,744	2 5 2½	2 7 6½

In these estates the proportion of irrigable land to which dry rates have been applied is very considerable, rising in Pinjokhra as high as 26 per cent. of the irrigable area. It is also to be remarked that the more highly assessed estates, Pinjokhra, Jasala and Khindralee, adjoin, and are hemmed in by estates of the Kandhlah Circle, to which they are exactly similar. Indeed the assessment of Jasala was not further raised only because it was thought inadvisable to increase the Government demand too rapidly, and there can be little doubt that when the present Settlement expires these estates will be able to bear with ease an assessment as high as any which has been fixed in this pergunnah. I would therefore exclude them for the present from Permanent Settlement.

19. There now remain of the tract west of the Kirsanee only those estates which compose the Kairanah Circle. In this circle, as a rule, canal irrigation has been more

recently introduced and is less fully developed, and the land, tilled for the most part by Goojurs, has not yet reached that high state of cultivation to which the immediate neighbourhood of the canal has long since attained. There are therefore various reasons which preclude the Permanent Settlement of this tract. Canal irrigation is still capable of very considerable extension. The general cultivation of the tract is somewhat backward, and even in those estates in which a comparatively high standard has been already reached, so much consideration was shown at Settlement, and in order to avoid the evil effects of too sudden a rise, the demand was raised so cautiously, that even now there is a large margin for enhancement. This moderation, although here and there it may be excessive, is in no way to be regretted, and the result of it will be a large increase to the capabilities of this tract, and, when the period of Settlement expires, a suitable addition to the Government demand.

20. The estates in this circle, all of which are held to be ineligible for Permanent Settlement, are given below. Of these estates there are a few like Charhao comparatively highly assessed, but Charhao adjoins Kandhlah and is little behind that circle; and as no less than 40 per cent. of the land in this circle was rated dry at Settlement, it is desirable that the Permanent Settlement of this tract, which is already fully irrigated by the canal, should be delayed.

	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate per acre on assessable area.	Rate per acre on cultivated area.
							Rs.	Rs. A. P.	Rs. A. P.
1. Asudpore ...	296	219	13	206	185	21	300	1 5 11	1 7 4
2. Islampore Ghasaoli ...	1,108	990	34	956	897	59	1,350	1 5 9	1 6 7
3. Ambehtah ...	631	591	56	535	426	109	200	1 5 8	1 7 11
4. Bamnaoli ...	461	439	48	391	318	73	500	1 2 3	1 4 6
5. Charhao ...	887	363	24	339	336	3	700	1 14 10	2 1 0
6. Esapore, Dhan Singh,	423	328	62	266	238	28	481	1 7 5	1 12 11
7. Kasimpore ...	645	559	90	469	371	98	700	1 4 0	1 7 10
8. Khera Kirtan ...	964	859	35	824	752	72	1,300	1 8 3	1 9 3
9. Gangaroo, Pati Sadat,	3,428	2,850	123	2,727	2,361	366	3,800	1 5 4	1 6 4
10. Gangaroo, Pati Gonju- ran ...	561	475	11	464	338	126	827	1 11 10	1 12 6
11. Gangaroo, Pati Musal manan ...	707	525	6	519	327	192	933	1 12 7	1 12 11
Total ...	9,611	8,193	502	7,696	6,549	1,147	11,696	1 6 10	1 8 3½

21. Of the Trans-Kirsanee estates in this pergunnah, there are therefore recommended for Permanent Settlement seventeen, containing the following area and settled at the following average rates :—

Total area in acres.	Assessable area.	Culturable waste.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate per acre on total area.	Rate per acre on assessable area.	Rate per acre on cultivated area.
						Rs.	Rs. As. P.	Rs. A. P.	Rs. A. P.
11,764	9,807	584	9,223	7,604	1,619	28,823	2 7 2	2 15 0	3 2 0

22. The tract east of the Kirsanee has been divided by Mr. Colvin into two circles, the one to the north and west, which takes its name from and partakes of the

character of the fine estates which lie round Kodanah in Shamlee, the other to the south called after the large village of Parasaolee. Generally speaking, the characteristics of the two circles are very clear and distinct. In the first circle there are Jat brotherhoods, who own a soil naturally fertile and with a substratum which admits of the cheap construction of earthen wells.

The southern circle again is owned and cultivated for the most part by Rajpoots, whose cultivation is, as might be expected, less perfect, and who labour under the disadvantage of occupying a high and arid tract in which the construction of wells is difficult and expensive.

Canal irrigation has not as yet been introduced into this neighbourhood, but the opening of the Yarpore Extension Rajbuha will no doubt effect a great change for the better in the circumstances of the drier portion of this tract. In the Kodanah Circle, however, Jat energy has already made well irrigation so general that little improvement can be expected, and in most estates no canal irrigation is promised.

23. There are in this way eligible for Permanent Settlement under the rules the following estates in the Kodanah Circle :—

	Total area in acres.	Total assessable area.	Culturable area.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate per acre on assessable area.	Rate per acre on cultivated area.	
								Rs. A. P.	Rs. A. P.	
1. Hasanpore ...	1,230	907	78	829	599	230	2,400	2 10 4	2 14 4	On the river.
2. Khisarpore ...	467	300	44	256	129	127	659	2 2 5	2 7 11	Ditto.
3. Lisadh ...	2,403	1,966	213	1,753	1,320	433	5,056	2 8 11	2 13 2	Ditto.
Total ...	4,109	3,173	335	2,838	2,048	790	8,115	2 8 11	2 13 9	

All these estates are on the river, and in each there is a large proportion of uneven land on the slope; the upland again is already so carefully cultivated by the Jats that, even if canal irrigation be extended to these estates, no very great improvement can be expected. Indeed the rates now levied, averaging Rs. 7-8-0 per acre wet, Rs. 4-8-0 dry, and Rs. 3 for land on the slope, are as high as those generally levied in the best canal villages; and as nearly all the level land is now irrigable, there is no reason to expect that canal irrigation would do more than it has done in similarly circumstanced estates west of the river, close the wells, and substitute rice for the equally profitable sugar-cane.

24. The estates which I have excluded from Permanent Settlement are Badshapur, Bhogalkherah, Karaodah, and Kherah Mustan, which will, with the exception of the second, be enormously benefited by the opening of the new rajbuha which passes through Karaodah and close to the other three estates. The present condition of these estates, the incidence of the assessment, and the prospect of canal irrigation are shown below :—

		Total area in acres.		Culturable waste.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate per acre on as assessable area.			Rate per acre on cul- tivated area.			Area to be irrigated by the canal.
									Rs.	Rs. As. P.		Rs. As. P.			
1. Badahhpore	...	247	203	1	203	111	91	579	2	13	8	2	13	10	140
2. Bhogalkherah	...	6	6	...	6	6	...	8	1	5	4	1	5	4	
3. Karaodah	...	949	877	99	778	495	283	2,105	2	6	5	2	11	4	420
4. Kherah Mustan (maafee)		835	758	74	684	672	12	1,884	2	7	11	2	12	3	280
Total	...	2,037	1,844	174	1,670	1,284	386	4,576	2	7	8½	2	11	10	840

25. Immediately to the south of the Kodanah estates lies the Parasaoli Circle, the treatment of which has, for a variety of reasons, proved much less successful than that of the more fertile townships to the north. As a rule, the estates in this circle are under-assessed, and there is moreover a very marked inequality, which, combined with the probable extension of irrigation from the new rajbuha, must preclude Permanent Settlement in the greater number of estates.

The more northern villages of this tract are owned and cultivated by Jats, and ought perhaps to have been included in the Kodanah Circle, which they most nearly resemble. Of these estates only one, that of Dungar, can be recommended for Permanent Settlement; the others are ineligible owing to the prospect of a large increase of irrigation from the new rajbuha. Just to the south of these Jat villages lie the estates of the Karol owners, who have been treated with such excessive leniency that even now the assessment, which was enhanced by Mr. Martin, barely amounts to 30 per cent. of very moderately stated assets. To the south and west of these again lie the townships owned and occupied by the Kachwei Rajpoots, who cultivate with quite as much industry as can be looked for from people of their caste, who notoriously vary the monotonous occupation of agriculture with occasional cattle-lifting expeditions. The assessment fixed for these estates implies assumed rent-rates of Rs. 4-2-0 wet and Rs. 2-10-0 dry, which the rent-rates found elsewhere in this circle, and above all in the Rajpoot estates of exactly similar quality adjoining it on the east, show to be considerably below the average of the neighbourhood. The slight general under-assessment of this tract and the occasional inequalities in the incidence of the land revenue are the less important, as the opening of the new rajbuha will render the Permanent Settlement of this tract inexpedient.

26. The recommendations, then, which have been made regarding this tract are—that the estate of Dungar be classed with the permanently settled estates of the Kodanah Circle, and that the remaining estates of the Parasaolee Circle be excluded from Permanent Settlement.

	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate on assessable area.	Rate on cultivated area.	Area to be irrigated by canal.	
							Rs.	Rs. A. P.	Rs. A. P.		
1. Dnugar ...	805	549	83	516	250	266	1,326	2 3 9	2 5 0	0	
2. Baral ...	2,924	2,590	305	3,285	1,001	1,284	4,200	1 9 11	1 13 5	280	A very little land on the river.
3. Phuganah, Pati Hukam ...	1,861	1,216	135	1,081	809	272	1,936	1 9 6	1 12 8		
4. Phuganah, Pati Diyanat ...	781	757	77	680	467	213	1,401	1 13 7	2 1 0	560	
5. Phuganah, Pati Rajrup ...	734	718	79	639	544	95	1,341	1 13 10	2 1 7		
6. Jogia Kherah ...	663	598	83	565	251	314	800	1 5 5	1 6 7	0	
7. Durganpore ...	899	647	41	606	346	260	1,100	1 10 8	1 13 1	0	O n t h e river.
8. Futtelpore Kheri,	744	618	29	589	341	248	700	1 2 2	1 3 1	280	
9. Kamrudin Nagar,	1,487	1,359	177	1,182	237	945	1,600	1 2 10	1 5 8	860	
10. Hariya Kherah...	986	887	66	821	320	501	1,070	1 3 4	1 4 2	0	O n t h e river.
Total ...	10,579	9,390	942	8,448	4,316	4,132	14,148	1 8 0½	1 10 9½	1,930	

27. It will be seen from the above statement that I have recommended the exclusion from Permanent Settlement of several estates which the Canal Department does not propose to irrigate; and generally I may explain that I have not felt myself bound to abide entirely by the professedly vague and uncertain information which the Canal Department has been able to furnish.

In this instance I recommend the exclusion of these estates partly because the assessment is hardly adequate, but mainly because I hold it to be in the highest degree unlikely that the Irrigation Department will be permitted to abide by the resolutions which it has formed; for it is to be remembered that, although it is proposed to reserve for the dry tract east of the Kirsanee, which has such urgent need of more efficient means of irrigation, canal water for only 3,660 acres, or less than one-quarter of the area, and to leave the driest estates of all unhelped, it is, it would seem, in contemplation to increase the already too extensive canal irrigation in the low and fertile plain to the west of the river. Now, although this intention is quite in accordance with the past system of distribution on the Eastern Jumna Canal, it is incredible that with the evil effects of over-irrigation before it Government should permit a waste of water, the only effect of which can be the closing of the wells which are still at work, increased injury to low-lying land, and the still further deterioration of the health of the people. I have therefore taken for granted that in the Parasaolee Circle canal irrigation will be extended beyond the one mile limit which has been set, and that the aim of the Canal Department will be in some degree to extend irrigation to the tracts in which it is most required, not as heretofore to confine it to the line of country in which wells are most easily sunk, and in which the aid of the canal is less a necessity than elsewhere. In making this assumption, I trust that I have been sufficiently justified by the recent orders regarding the redistribution of canal water, which orders leave little room to doubt that the immediate revenue from water-rates is no longer to be the sole object of the Department, but that some care is to be taken to ensure the irrigation of those tracts the improvement of which, without help from the State, must be slow and uncertain.

28. In the whole Pergunnah of Kandhlah, then, there are 77 estates, of which 65 are eligible for Permanent Settlement under the 80 per cent. rule, and of these 21 are now recommended for Permanent Settlement under the present rules,—17 estates to the west of the Kirsanee, which now enjoy the benefits of canal irrigation, and 4 to the east of that river, which are already so highly cultivated and so fully irrigated from wells that no great improvement from the introduction of canal irrigation is to be looked

for. The area of these estates and the incidence of the present assessment are shown in the subjoined table :—

Estates recommended for Permanent Settlement.

	Total area in acres.	Assessable area.	Culturable area.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate per acre on total area.	Rate per acre on assessable area.	Rate per acre on cultivated area.
							Rs.	Rs. As. P.	Rs. As. P.	Rs. As. P.
17 estates west of Kir-sanee ...	11,764	9,807	548	9,223	7,395	1,828	28,828	2 7 2	2 15 0	3 2 0
4 estates east of Kir-sanee. ...	4,914	3,732	368	3,354	2,298	1,056	9,841	1 14 5	2 8 2	2 12 6
Total, 21 estates ...	16,678	13,539	916	12,577	9,693	2,884	38,169	2 4 7	2 13 2	3 0 7

The area of, and the incidence of the assessment on the estates, regarding which it is recommended that the present assessments should *not* be made permanent, are—

Estates not recommended for Permanent Settlement.

	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate per acre on total area.	Rate per acre on assessable area.	Rate per acre on cultivated area.
							Rs.	Rs. As. P.	Rs. As. P.	Rs. As. P.
31 estates west of Kir-sanee ...	27,614	23,450	1,677	21,773	20,077	1,696	45,070	1 10 1	1 14 9	2 1 1
13 estates east of Kir-sanee ...	12,616	11,234	1,116	10,118	5,600	4,518	18,724	1 7 9	1 10 8½	1 13 7½
Total, 44 estates ...	40,230	34,684	2,793	31,891	25,677	6,214	63,794	1 9 4	1 13 5	2 0 1

These statements show that there is a very considerable difference between the averages of the two classes of estates, and I trust that this difference and the detailed remarks which have been recorded in the pergunnah books regarding each estate will be held to justify the exclusion from Permanent Settlement of so large a portion of this flourishing pergunnah.

29. And with respect to the first class, while I may confidently state that the 21 estates composing it comply with all the conditions which have been laid down, that they are fairly and equally assessed, and that they have all reached a high standard of cultivation, I would at the same time strongly recommend that the plan so often suggested be followed, and that the assessment be fixed in produce instead of in money. If this were done, all the advantages of Permanent Settlement would be secured, and one at least of the greatest disadvantages would be avoided. The idea moreover would not be a new one in this tract, for fixed grain rents work as smoothly in this, one of the finest portions of the Upper Doab, as they do in some of the best agricultural counties

at home, and there does not appear to be, in this neighbourhood at least, any sufficient ground for the fear entertained by the late Lieutenant-Governor, that the fixation of an assessment in grain or other produce "might lead to doubts as to the *bonâ fide* permanence of the assessment." Every landlord would know, as every tenant paying a fixed grain rent knows right well now, that the increased produce caused by increased expenditure of labour and capital would be entirely his own, and the fact that Government would participate in the increasing value of produce could have no effect in discouraging enterprise.

30. The adoption of some such system is the more necessary, because even in the most highly assessed estate Mr. Colvin's jumma is slightly below half assets, and this is due partly, it may be, to the peculiarities of the system in accordance with which a considerable portion of the irrigable area was rated as if it had been dry, but mainly, it is believed, owing to his having formed what appears to be an erroneous view of the average price of grain at the time of Settlement.

Mr. Colvin came to the conclusion that the price of grain had fallen since Mr. Thornton's Settlement; in other words, that the rate of 36½ seers for wheat, which Mr. Thornton had assumed in 1841, was too high a rate to serve as the basis of assessment in 1861. In arriving at this conclusion, Mr. Colvin was no doubt influenced by the anxiety to exclude from calculation all years of exceptional scarcity. But any calculation, the result of which is to be compared with Mr. Thornton's average, ought not to exclude any year, however exceptional; for the period which preceded Mr. Thornton's Settlement ended with four years of famine prices, the severity of which has not even yet been equalled. If Mr. Colvin's mistake be corrected, it will be found that the price of wheat had risen by not less than 3 seers, or about 8 per cent., and that a rate of 33 seers would have been a moderate one to assume at the time of Settlement. Our experience since 1862, moreover, has been such as to render it more than ever questionable whether it is expedient for Government to abandon all right to share in the increased value of agricultural produce. The price of goor has enormously increased, that of cotton would seem to have permanently attained to a rate 50 per cent. higher than that which formerly ruled, and if there be assumed for wheat a rate no higher than 30 seers to the rupee, this would give in seven years a change from the price assumed against Government and in favour of the payer of land revenue to the extent of 17 per cent.

31. Under these circumstances, I would strongly recommend that if Government should see fit to sanction the Settlement of these 21 estates in perpetuity, the present jummas should be expressed in produce, and that right be reserved to Government to re-adjust the money demand after the expiration of 20 or 30 years, and thereafter at such intervals as might be fixed.

If this were done, no change need be made in the amount of land revenue now paid; the proprietors would pay the sum fixed at Settlement until the expiry of the term for which that Settlement may be sanctioned; but the amount in grain or other produce at the average rates at the time of Settlement would be recorded, and this produce assessment would be the assessment sanctioned in perpetuity.

ALAN CADELL,
Settlement Officer.

7th February, 1870.

WITH this report are submitted the following Statements :—

1. Statement showing the estates in Pergunnah Kandhlah eligible for Permanent Settlement inasmuch as they have 80 per cent. of the assessable area under cultivation, those with less than 80 per cent. of the assessable area under cultivation, and those of the first class which are recommended for Permanent Settlement.

2. Statement of rent-rates.

3. Statement showing harvest prices in Jelalabad, Pergunnah Thana Bhowan, of wheat, uncleaned cotton and goor, from 1818 to 1869.

APPENDIX No. I.
List of Estates in Pergunnah Kandhlah.

65 estates with 80 per cent. of the assessable area under cultivation and eligible for Permanent Settlement.	21 estates recommended for Permanent Settlement.	<ol style="list-style-type: none"> 1. Aliam, Pati Kalan. 2. Ailam, Pati Khoord. 3. Banehra. 4. Bharsi. 5. Biramkhara, Pati Ramdat. 6. Biramkhara, Pati Lada. 7. Hasanpore. 8. Khesurpore. 9. Khawaspore. 10. Dungur. 11. Russoolpore. 12. Silpa. 13. Sonah. 14. Tahirpore Bhabisa. 15. Kewanah. 16. Lahourpore. 17. Lesarh. 18. Mutnaoli. 19. Mimlah. 20. Huormaspore.
	44 estates, the exclusion of which from Permanent Settlement is recommended.	<p style="text-align: center;">MAAFEE.</p> <ol style="list-style-type: none"> 21. Sherepore. 1. Asudpore. 2. Islampore, Ghasaowli. 3. Aldee, Pati Sadasookh, 7½ biswas. 4. Aldee, Pati Naunkohund, 7½ biswas. 5. Aldee, Pati Baijnath, 5 biswas. 6. Ambehta. 7. Badabhpore. 8. Bamnaoli. 9. Baral. 10. Bhogalkhera. 11. Pinjokhra. 12. Phoganah, Pati Hukam. 13. Phoganah, Pati Diyanut. 14. Phoganah, Pati Rajrup. 15. Jasalah. 16. Jogiakherah. 17. Charhao. 18. Chakdumakhera. 19. Doorganpore. 20. Rampore Kheree, Pati Bansidhur. 21. Rampore Kheree, Pati Goshain. 22. Shabpore. 23. Esapore, Dhan Singh. 24. Futtehpore. 25. Futtehpore Kheree. 26. Faselpore, Khalsah. 27. Faselpare Musbetah. 28. Kasimpore. 29. Kamroodinnagar. 30. Kandhlah, 15 biswas. 31. Kandhlah, 5 biswas. 32. Kandhlah, Arasi Mutafarkat. 33. Karoudah. 34. Khundrouli, Pati Musulmanan. 35. Khundrouli, Pati Hinduan. 36. Kherah Kurtan. 37. Kherah Salih. 38. Gangeroo, Pati Sadat. 39. Gangeroo, Pati Gujran. 40. Gangeroo, Pati Musulmanan. 41. Malikpore. 42. Nalah. 43. Hariya Kherah. <p style="text-align: center;">MAAFEE.</p> <ol style="list-style-type: none"> 44. Kherah Mustan. 1. Basee. 2. Parasaoli. 3. Pahaonkurpore. 4. Dunda Kherah. 5. Dangreor. 6. Rajpore Chajpore. 7. Sarnaoli. 8. Esapore Sheru. 9. Gujarpore. 10. Loi. 11. Dudahur. 12. Kmyar.
12 estates with less than 80 per cent. of the assessable area under cultivation and ineligible for Permanent Settlement.		

APPENDIX NO. II.

Rent-rates in Pergunnah Kandhlah per kutcha beegah—one-sixth of an acre.

Number.	Name of village.	Rent-rates per kutcha beegah fixed at Settlement.				Rent-rates fixed by private agreement at and since Settlement.				Rent-rates fixed in Court.				Remarks regarding rent-rates fixed by private agreement and in Court.
		Wet.		Dry.		Bhoor.		Wet.		Dry.		Bhoor.		
		Rs.	As. P.	Rs.	As. P.	Rs.	As. P.	Rs.	As. P.	Rs.	As. P.	Rs.	As. P.	
	KANDHLAH CIRCLE.													
	Aldoe, Pati Sadasukh	...	...	...	...	...	...	1 2 0	...	...	...	...	...	For 108 acres.
	Aldoe, Pati Nannuk Chund	...	...	...	...	...	...	1 4 0	...	...	...	...	...	For 60 acres; the rest in kind.
	Aldoe, Pati Baijnath	...	...	...	...	...	...	...	...	...	...	...	...	No money rents.
	Ailam, Pati Kalan	...	...	...	...	...	...	1 7 4	...	...	...	...	...	For 55 acres. In Court in commutation.
	Ailam, Pati Khoord	...	...	...	...	...	...	1 4 0	0 12 0	...	...	...	...	For 247 acres.
	Banehra	...	...	...	...	...	...	1 2 0	0 8 0	...	...	...	...	For 112 acres; the dry land is on the slope, and of the wet some has to be terraced.
	Bharai	...	...	...	...	...	...	1 1 0	...	...	...	...	...	For 36 acres.
	Rampore Kheri	...	...	...	...	...	...	1 11 0	...	...	...	...	...	For 35 acres.
	Sona	...	...	...	...	...	...	1 4 0	0 12 0	...	...	...	...	For 414 acres.
	Shahpore	...	...	...	...	...	...	1 5 0	...	...	...	...	...	For 240 acres.
	Tahirpore Bhabisa	...	...	...	...	...	...	1 7 0	0 12 0	...	...	...	...	For 450 acres.
	Futtehpore	0 18 0	...	...	...	...	...	...	...	...	...	...	...
		0 9 3	...	...	...	...	...	...	...	...	...	...	...
	Kandhlah	...	...	...	...	...	41 seers wheat.	1 13 4	...	...	...	...	...	For 884 acres; a grain rent giving at 3 seers Rs. 1-4-6; no distinction made between land entered wet and that entered dry. The money rent has been fixed for 38 acres.
	Kawana	...	...	...	...	...	...	0 15 0	0 6 0	...	...	...	...	For 91 acres, much of which both wet and dry is on the slope.
	Khawaspore	...	...	...	...	...	...	...	...	...	...	...	...	For 34 acres.
	Goofurpore	...	...	...	...	...	...	1 0 0	...	...	...	...	...	For 79 acres.
	Mimlah	...	...	...	...	...	...	1 3 6	...	...	...	...	...	For 392 acres.
	Nalah	...	...	...	...	...	...	1 0 0	0 10 0	...	...	...	...	For 93 acres.
	Hurnaspore	...	...	...	...	...	...	1 6 0	...	...	...	...	...
	SHAMLEE CIRCLE.													
	Biram Kherah, Pati Ramdutt	...	...	...	...	...	...	1 0 0	...	...	...	...	...	23 acres; rest khudkasht.
	Biram Kherah, Pati Lada	...	...	...	...	...	...	1 4 0	...	...	...	...	...	13 acres.
	Pinjokhra	...	...	...	...	...	...	0 14 7	...	...	...	...	...	65 acres.

Settlement	Area	Rate	Remarks
51 acres; rest khudkasht and kind rents.
Old rate fixed before irrigation still retained.
29 acres; rest khudkasht and kind rents.
69 acres; ditto.
By private agreement for 165 acres before Settlement; at Settlement for 68 acres.
Average rate 38 seers of wheat per kutcha beegah for 169 acres at 30 seers about Rs. 8 per acre
347 acres, chiefly among Goojurs.
Fixed since Settlement for 78 acres. No money rents.
For 48 acres.
For 82 acres.
For 117 acres.
For 216 acres.
For 324 acres wet and sand and land on the slope to the river.
68 acres.
164 acres.
54 acres.
181 acres.
26 acres grain rent.
90 acres.
306 acres.
143 acres.
78 acres.

APPENDIX N o. II.—(Concluded.)

Rent-rates in Pergunnah Kandhlah per kutcha beegah=one-sixth of an acre.

Number.	Name of village.	Rent-rates per kutcha beegah fixed at Settlement.				Rent-rates fixed by private agreement at and since Settlement.				Rent-rates fixed in Court.			Remarks regarding rent-rates fixed by private agreement and in Court.
		Wet.	Dry.	Bhoor.	All round.	Wet.	Dry.	Bhoor.	Wet.	Dry.	Bhoor.		
	PARASOLI CIRCLE.												
	Baral (Rajpoots)	...	...	...	...	0 12 0	0 8 0	...	Rs. As. P.	Rs. As. P.	Rs. As. P.	...	Average of 311 acres brought down by the old rates not yet changed. The newer wet rates are as high as Rs. 1-4-0.
	Parasoli (M. Rajpoots)	...	...	...	1 4 0	...	...	...	...	...	...	...	For 74 acres including a little dry land.
	Phoganah, Pati Hakam (Jats)	...	...	...	...	1 0 0	0 9 0	...	...	...	...	...	For 267 acres.
	Ditto Deyanah (Jats)	...	...	...	...	0 12 0	0 8 0	...	...	...	...	...	For 409 acres; average brought down by low rates allowed to kinsmen.
	Ditto Rajrup (Jats)	...	...	...	...	0 12 0	0 8 0	...	...	...	...	...	For 169 acres, ditto ditto.
	Jogiakherah (Rajpoots)	...	...	...	...	0 11 0	0 7 0	...	...	...	...	...	For 231 acres, ditto ditto.
	Durganpore (Rajpoots)	...	...	...	...	0 12 0	0 8 0	...	...	...	...	...	For 181 acres, ditto ditto.
	Dungar (Jats)	...	...	...	...	1 2 0	0 10 0	0 5 6	...	...	...	...	For 123 acres.
	Rajpore Chajpore	...	...	...	...	0 12 0	0 7 0	0 7 0	...	...	...	...	For 398 acres.
	Sarnoli	...	...	...	...	1 2 0	0 9 0	...	...	...	...	...	For 106 acres; the dry land includes poorer land on the slope.
	Futtehpore Kheri	0 10 0	0 6 0	...	1 0 0	...	...	...	1 0 0	0 10 0	...	...	Tenants at will pay about Re. 1 all round, and for the greater portion of the estate the low rates, fixed at Settlement, have been enhanced in the District Court.
	Kumradinnager	...	...	...	...	0 12 6	0 8 0	...	...	...	...	...	For 520 acres, chiefly held by non-resident cultivators.
	Loi	...	...	...	...	0 14 0	0 8 0	...	...	...	...	...	For 98 acres.
	Haria Kherah	...	...	...	...	0 14 0	0 6 0	0 6 0	...	...	...	...	For 438 acres; much of the dry land is of the very poorest quality and on the slope.

APPENDIX No. III.

Note on Prices.

In the accompanying statement I have given the *harvest* prices for 52 years of the great staples of the pergunnah and of the district—wheat, goor and cotton. These price lists have been obtained from a Mahajun family in Jalalabad, Pergunnah Thanah Bhowm, one of the chief marts of the district. The prices are believed to be correct, and are generally substantiated both as regards wheat by Mr. Thornton's district average rate (page 145, North-Western Provinces' Settlement Reports) and generally by those obtained from other pergunnahs for the more recent years. There is of course much room for difference of opinion as to what rate would be a fair and safe one to assume, but there can, I think, be little doubt that Mr. Colvin was wrong in supposing that prices had fallen. For my own part I think that a rate of 33 seers to the rupee, half way between the average of 25 years and that of 30 preceding Mr. Colvin's assessment, would have been a fair and safe rate to assume. In practice, and with reference to the upward tendency of prices, I have adopted as a rule in commutation a rate of 32 seers, or Rs. 1-4-0 to the maund.

Regarding the rise both in goor and (what is of less importance) in cotton, there can be no doubt, and there were at the time of settlement plenty of data to show that an addition of 15 per cent. to the former value of this class of produce was fully justified. This rise in price is of very great importance in a pergunnah in which nearly one-fourth of the area is under these two crops.

It would appear that the average price of uncleaned cotton is not likely to fall below 12 seers, while that of goor is so abnormally high that it would be useless to hazard a conjecture regarding the rate of the future.

It is however to be remarked that recent improvements in communications still preserve the advantage which the Upper Doab has always enjoyed in its vicinity to the great markets to the west and south-west of the Jumna. The extension of canal irrigation in the Punjab and the completion of the Agra Canal may, by enlarging the area under cane cultivation in tracts still nearer to the old markets, increase competition; but even all these improvements elsewhere, and even the bridging of the Ganges and increased importation from a canal irrigated Rohilkhund, will not most likely very seriously affect prices in a tract whose market will be extended quite as quickly as competition will increase.

The statistics which I have given are, I trust, sufficient to warrant my differing from the conclusion at which Mr. Colvin arrived, and to justify the recommendation that in the present uncertainty of prices Government should not bind itself for ever to a money assessment calculated upon rates which have already become obsolete.

ALAN CADELL,
Settlement Officer.

NOTE.—The seer is that of the district=88 Government rupees.

Wheat.			Uncleaned Cotton.		Goor.	
1818		30	Seers.	13	Seers,	25
19		23		20		21
20		24		...		15
21		28		12		16
2		34		...		22
3		40		...		26
4		47		22		24
5	Average of period	46		19		21
6	from 1818-42, 25	30		14		14
7	years, including	36		30		31
8	the famine of	46		25		23
9	1838 and the pre-	44		21		25
30	vious one 16	46		34		22
1	ceeding one 34—	40		25		20
2	seers. 25	50		22		25
3		40		14		16
4		30		20		...
5		40		25		21
6		50		14		20
7		35		19		16
8		20		15		14
9		20		14		18
40		20		15		17
1		24	20 | 740	15	18 | 360	19 | 381
2		25		17		18
3		40	37	15	20	16
4	Average of period	40	Average rate of pe-	14	Average rate as far	20 ¹
5	from 1838-62, 25	36	riod from 1821-40.	14	as can be ascertain-	19
6	years, including	24		22	ed of period from	21
7	the famine of	31		18	1821-40.	14
8	1838 and the suc-	40		12		16
9	ceeding one 32—	35		22		12
50	seers. 25	40		18		18
1		49		20		17
2		25		22		21
3	This rate is the	35		22		18
4	average one of	35		18		16
5	25 years preced	47		14		17
6	ing Mr. Colvin's	42		19		25
7	Settlement, that	40		18		20
8	of 30 years is 33 ³ / ₅	38		10		26
9		35		10		17
60		24		7		14
1		14	20 | 705	10	20 | 327	17
2		28		12		18
3		39	1841-60-35 ¹ / ₂	7	1841-60-16	23
4		39		8		17
5		33	22 | 747	12	22 | 349	16
6		25		11		18
7		22	1841-62-34	11		16
8		26	Average rate of the	6	1841-62-15 ¹⁹ / ₂₂	10
9		16	22 years between	11	About one-third of	8
			the Settlements of		the weight is left	10
			Mr. Thornton and		after cleaning.	
			Mr. Colvin.			

PERGUNNAH BOORHANAH.

Boundaries and position of the tract.—Pergunnah Boorhanah adjoins Kandhlah on the east; it is bounded on the north by Shamlee and Shikarpore of this district; on the south by Barout and Barnawah of Meerut, and on the east by the Kalee River. The Hindun River, running through the pergunnah from north to south, divides it into two distinct portions, the small triangle between the Kalee and the Hindun and the larger tract to the west of the latter river. In the present uncertainty as to irrigation from the Deobund branch, it will be best to postpone the Permanent Settlement of the former tract until the adjoining portion of Shikarpore shall again come under revision at the expiry of the present term of settlement. In the tract to the west of the Hindun, however, there are many estates which are eligible for Permanent Settlement, and there would be more, were it not that the probable extension of canal irrigation renders necessary the exclusion of several townships. This portion of the pergunnah has been divided into two circles, the first chiefly to the south and east, the second circle to the north and west. The areas of the three circles into which the pergunnah is in this way divided are as follows :—

Number of estates.	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigated.	Dry.	Assessment.	Rate per acre of total area.	Rate per acre of assessable area.	Rate per acre of cultivated area.
							Rs.	Rs. As. P.	Rs. As. P.	Rs. As. P.
14 estates in the Kalee and Hindun Doab ...	14,039	11,408	2,248	9,16		5,455	17,479	1 3 10	1 3 6	1 14 6
21 estates in the 1st Trans-Hindun Circle ...	26,063	21,947	2,004	18 94		7,620	41,578	1 9 6	1 14 4	2 3 1
10 estates in the 2nd Trans-Hindun Circle ...	10,920	9,147	1,376	7,77		4,091	12,089	1 1 3	1 5 2	1 3 11
Total ...	51,074	42,502	5,628	35,874	18,708	17,166	71,146	1 6 3	1 10 9	1 15 9

2. *Estates eligible for Permanent Settlement under the 80 per cent. rule.*—Of these estates, 8 in the 1st Circle, 17 in the 2nd and 8 in the 3rd are eligible for Permanent Settlement under the 80 per cent. rule. Owing to a variety of considerations, but chiefly on account of the doubt as to the irrigation from the projected Deobund branch, occasional inequality in assessment, and the uncertainty attending the capabilities of estates on the rivers, I would recommend that the Cis-Hindun tract be for the present excluded from Permanent Settlement. It remains therefore only to consider the circumstances of the larger tract, which is situated to the west of the River Hindun.

3. *The Trans-Hindun portion.*—This tract contains estates which formerly belonged to the various old pergunnahs of the Meerut District, which were settled by Mr. Glyn and Sir Henry Elliot, but the majority of the estates belonged to the territory of the Begum Sumroo, on whose death they were settled by Mr. Plowden.

The rent-rates which Mr. Plowden assumed for this pergunnah are given in page 238, Volume I. of the North-Western Provinces Settlement Reports, but unfortunately it is not very clear to which circles the different rates were applied :—

1st Class	Rs. 6-6-5 wet	Rs. 3-3-3 dry	} per acre.
2nd Class	„ 4-12-9	„ 2-6-5	

The first class is described as lying “to the east of the Hindun River, and bordered on by the settled pergunnahs of Shikarpore and Phooganah;” the second class as situated “to the west of the same river, and bordered on by Pergunnah Kandhlah.” Now Phooganah and Shikarpore are both like Kandhlah on the west side of the river, and I am inclined to think that both rates must have been applied to the Trans-Hindun estates, while the Cis-Hindun portion was included in Pergunnah Sirdhanah. Mr. Keene

appears to have assessed on average rates of Rs. 5-4 wet and Rs. 2-12 dry; but in roughly testing his assessments I have felt myself obliged by the far higher rent-rates which almost invariably prevailed in the best estates to test roughly the jummas of the best circle by the rates used by Mr. Plowden twenty years before.

4. *Comparison of the present with the former Settlement.*—I have divided this tract into two circles—the first composed of 21 estates, chiefly to the south and east, held almost entirely by Rajpoot, Taga and Jat brotherhoods, and fully irrigated and admirably tilled; the second and inferior circle containing 10 estates to the north and west, owned for the most part by Pathan and Karol landlords, who do little for their estates, and by constantly harassing their tenants restrain the enterprize of the class to which we have generally, in estates not owned by cultivating brotherhoods, to look for improvement. The areas and assessment of the whole tract according to the Settlement Records of Mr. Keene and of Mr. Plowden are as follows :—

Settlement.	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigated.	Dry.	Assessment.	Rate per acre of total area.			Rate per acre of assessable area.			Rate per acre of cultivated area.		
								Rs.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Former Settlement...	36,334	28,848	5,666	23,182	...	...	57,722	1	9	5	2	0	0	2	7	10
Present Settlement ...	36,935	31,094	4,380	26,714	15,003	11,711	53,667	1	7	3	1	11	7	2	0	2
Difference ...	+651	+2,246	-1,286	+35,32	...	...	4,055	-0	2	2	0	4	5	-0	7	8

5. *Decrease in the assessment accounted for.*—The decrease in the assessment is in some measure due to the half-asset principle of assessment, but most of the loss to the Government revenue is unquestionably owing to excessive reduction, especially in the large estate of Jaolah. The assessment of this estate was reduced from Rs. 6,110 to Rs. 3,883. For this there were several reasons. The former owners had taken part in the disturbances of 1857, and the estate had been given as a reward for the good service rendered by Syud Imdad Husen of Tisang, Tehseeldar of the Huzoor Tehseel, and in this district it appears to have been thought necessary to settle all reward estates at a jumma of 25 per cent. At first, too, the zemindar must have had some difficulty in dealing with the Rangar ex-proprietors. Mr. Keene writes that he “had the rent-roll to guide him;” but the moment Settlement was over the rent-roll rose with astonishing rapidity, and it now stands at $3\frac{1}{2}$ times the Government demand, very little of the increase being due to expenditure on the part of the zemindar. Consideration under the circumstances was no doubt proper; but even if canal irrigation were not to be extended to this estate, I should not have felt justified in recommending this and other similar estates for permanent assessment on the present terms. But besides estates like Jaolah there are some of those held by Bhyacharah communities which unquestionably required relief, but in the case of which the relief has been so enormous as to leave doubt as to whether the present assessment is fitted to be other than a temporary one. As a specimen of this class I give the first estate on the list of those eligible for Permanent Settlement, Atawah. This estate is owned and cultivated by one of those admirable Jat communities, and was assessed by Mr. Plowden at rates of Rs. 3-12-0 per acre on the assessable and Rs. 3-13-6 on the cultivated area. Mr. Keene reduced the assessment from Rs. 2,920 to Rs. 1,929; the new jumma falling at rates of Rs. 2-6-9 on the assessable area and Rs. 2-10-2 on the cultivated. Now a very large reduction was no doubt necessary to bring the assessment down to a half-asset one, but Atawah is more fully irrigated than any of its neighbours, and ought to bear a higher instead of a lower rate than that of the estates in its vicinity. One cannot regret that a township which previously paid so large a quota to the State should for a term of years be leniently assessed, but I do not think that Mr. Keene himself, if a Permanent Settlement had

been before him, would have made the large reduction which he granted. It would be easy with the sanction of Government to raise the present jumma to the standard to which the assessment of its neighbours points; but, unless this be done, I would recommend that such estates should be excluded from Permanent Settlement.

6. *The Permanent Settlement of eight estates recommended.*—Excluding, then, such estates as Jaolah and Atawah for the reasons given in detail in the remarks regarding each estate, and those also into which canal water is shortly to be brought, the estates given below appear to me to be eligible for Permanent Settlement:—

Names of estates	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate per acre of assessable area.			Rate per acre of cultivated area.			Remarks.
								Rs.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.		
1. Aoksolee ...	851	565	105	460	100	297	971	1 11 6	2 1 9	On the river.				
2. Bitgodah ...	1,323	1,106	62	1,044	782	282	2,683	2 6 9	2 9 2					
3. Barsodah ...	1,713	1,597	60	1,537	1,184	353	4,218	2 10 3	2 11 11					
4. Barkata Bowa ...	296	255	15	240	135	105	615	2 6 6	2 8 10					
5. Kutabpore ...	654	483	74	409	206	203	853	1 12 3	2 1 4	Ditto.				
6. Minkalee ...	752	680	43	637	369	268	1,365	2 0 3	2 3 8					
7. Mahaljana (mah- lee).	793	699	107	592	188	404	1,300	1 12 9	2 3 2	Ditto.				
8. Nagwa ...	1,724	1,305	139	1,166	806	360	2,305	1 12 3	1 15 6					
Total ...	7,911	6,690	695	6,095	2,993	2,352	14,306	2 2 3	2 5 7					

7. *Reasons for excluding the remaining Estates of the Trans-Hindun Tract.*—The following estates, on the other hand, which are eligible under the 80 per cent. rule, are not recommended for Permanent Settlement—in some cases, because canal irrigation will be extended to them; in others, because the present assessment is hardly adequate:—

										Rate per acre of cultivated area.	Irrigation promised from Canal.	Remarks.
										Rs. As. P.		
										2 10 2	...	
Bahloipore ...	396	376	3	373	251	122	547	1 11 7	1 11 10	70	On the river.	
Barkatah Moghlan ...	439	408	21	387	194	193	508	1 3 10	1 4 11	...		
Bagianah ...	694	647	23	624	500	191	1,126	1 11 10	1 12 10	70		
Jbanderi ...	562	522	21	501	127	250	676	1 7 3	1 12 8	...		
Satheri ...	527	471	7	464	221	133	921	1 15 3	1 15 9	...		
Kuravah ...	985	899	196	703	663	88	1,941	2 2 2	2 8 3	140		
Kurthal ...	1,202	1,072	100	972	547	325	1,928	1 12 9	1 15 9	...		
Kharar ...	2,305	2,619	460	2,159	1,322	827	5,936	2 4 7	2 12 4	740		
Kuralsee ...	1,522	1,417	107	1,310	623	697	2,307	1 8 11	1 11 0	...		
Total ...	10,036	9,186	1,006	8,180	5,369	2,811	17,829	1 15 2	2 3 0	1,000		

Of the ten estates in the second class, there are only two which are ineligible for Permanent Settlement under the 80 per cent. rule. The areas and assessment of the remaining eight are as follows :—

Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigated.	Dry.	Assessment.	Rate per acre on assessable area.	Rate per acre on cultivated area.
						Rs.	Ra. As. P.	Ra. As. P.
8,339	7,375	805	6,570	3,071	3,499	10,060	1 5 10	1 8 6

There is, it will be seen, a very considerable dry area ; and as the new rajbuha will pass within $2\frac{1}{2}$ miles of the most distant estate, I have thought it desirable to exclude the whole tract from Permanent Settlement. It is true that the Canal Department only proposes to give water for 1,290 acres in five estates ; but there can be little doubt that if the more recently adopted principles regarding distribution are carried out, a larger supply of water will be placed at the disposal of this tract, and irrigation for 1,500 acres annually distributed in proportion to the requirements of each estate would unquestionably increase the assets of the eight estates by more than 20 per cent. of the assets assumed at Settlement.

Abstract of Recommendations.—I have therefore recommended for Permanent Settlement only eight estates in this pergunnah, and regarding these estates it is to be remarked that it might be well if the Irrigation Department were again to consider whether canal irrigation is likely to be introduced. At present they are distant from any proposed rajbuha, and as they have already reached a high standard of cultivation and are assessed at high rates, they appear to me to be entitled under the rules to Permanent Settlement ; but I would recommend that in this pergunnah, as in Kandhlah, the assessment to be declared permanent should be stated in grain or other produce.

Numbers of estates.	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigated.	Dry.	Assessment.	Rate per acre on total area.	Rate per acre on assessable area.	Rate per acre on cultivated area.	Remarks.
							Rs.	Ra. As. P.	Ra. As. P.	Ra. As. P.	
Eight estates recommended for Permanent Settlement.	7,911	6,690	605	6,085	3,333	2,252	14,306	1 12 11	2 2 3	2 5 7	
Twenty-six estates eligible under the 80 per cent. rule, but not recommended.	26,087	22,753	2,495	20,258	10,764	9,494	33,378	1 7 6	1 11 0	1 14 4	
Eleven estates entirely ineligible.	17,076	13,059	3,528	9,531	4,111	5,420	18,462	1 1 4	1 6 7	1 15 0	
Total ...	51,074	42,502	6,628	35,874	18,708	17,166	71,146	1 6 3½	1 10 9	1 15 9	

A. CADELL,

Settlement Officer.

9th February, 1870.

APPENDIX I

List of Estates in Pergunnah Boorkanah.

Thirty-four estates with 80 per cent. of the assessable area under cultivation.	Eight estates recommended for Permanent Settlement.	<ol style="list-style-type: none"> 1. Aokaoili. 2. Bitaodah. 3. Barkatah Rawa. 4. Baraodah. 	<ol style="list-style-type: none"> 5. Kutabpore. 6. Mindkali. 7. Mahajana (maafce.) 8. Nagwa.
Twenty-six Estates the exclusion of which from Permanent Settlement is recommended.		<ol style="list-style-type: none"> 1. Atawah. 2. Aterna Allipur. 3. Baglanah. 4. Bahloipur. 5. Barkata Moghlan. 6. Taudah. 7. Todah. 8. Joolah. 9. Jandhere. 10. Habibpur Sikri. 11. Husenabad. 12. Khisarapur. 13. Rainer Aterna 	<ol style="list-style-type: none"> 14. Ransipur. 15. Rukanpur. 16. Satheri. 17. Sarai. 18. Shahdabar. 19. Kurelsf. 20. Korawah. 21. Kurthul. 22. Kharar. 23. Garhwalpore. 24. Lohsanah. 25. Mandaoli. 26. Mandwarah.

APPENDIX II.

STATEMENT SHOWING RENT-RATES IN PERGUNNAH BOORHANAH.

The rent-rates are for the kutchra beegah of the district = one-sixth of an acre.

Number.	Name of Village.	Fixed at Settlement by Deputy Collector.			Fixed since Settlement by private agreement.			Fixed in Court.			Remarks regarding rent-rates fixed by private agreement and in Court.	
		Wet.	Dry.	Bhoor.	All round.	Wet.	Dry.	Bhoor.	Wet.	Dry.		Bhoor.
1st CLASS ESTATES WEST OF HINDUN.												
1	Atali	...	...	...	...	0 14 0	0 8 0	...	...	...	...	464 acres. Much land on the slope.
2	Atawah	...	...	...	...	0 14 0	0 10 0	...	...	...	...	300 "
3	Aokaoli	...	...	...	...	1 1 0	0 9 0	...	...	...	...	178 "
4	Bitadiah	...	...	...	...	0 14 0	0 10 0	...	1 2 0	0 12 0	...	208 " In Court in commutation for 11 acres.
5	Baradiah	...	...	...	...	1 2 0	0 12 0	...	...	...	...	286 "
6	Bahlolpur Hathauri	...	...	...	...	1 0 0	0 10 0	...	...	...	...	241 "
7	Pagianah	...	...	...	...	0 12 0	0 8 0	...	...	...	...	214 "
8	Burbanah	...	...	...	...	0 15 0	0 8 0	...	...	...	...	2,074 "
9	Barkatoh Mr bal Rawa	...	...	...	...	1 0 0	0 10 0	...	...	...	...	100 "
10	Barkatah Mahal Moghlan	...	...	...	...	1 0 0	0 11 0	...	...	...	...	281 "
11	Jandheri	...	...	...	...	1 1 0	0 11 0	...	...	...	...	183 "
12	Satheri	...	...	...	...	0 12 0	0 9 0	...	...	...	...	201 "
13	Kuralsi	...	...	...	...	1 0 0	0 12 0	...	...	...	...	607 "
14	Kurthal	...	...	...	...	0 15 0	...	...	...	...	...	The higher rate some years after Settlement for 74 acres; the lower ones before Settlement for 463 acres.
15	Kutabpur Datanah	0 8 9	...	...	...	...	0 10 0	...	...	...	...	No other rent-rates.
16	Mindkalee	0 10 0	0 7 0	...	...	0 15 0	0 14 0	...	...	...	...	For 23 acres by occupancy tenants to under-tenants.
17	Mahajjenah	0 8 0	0 6 0	...	...	1 0 0	0 11 0	...	...	...	...	Rates fixed at Settlement for 304 acres. The tenants at these nominal rates sublet their land for an all round rate of annas 12-8 = Re. 1 wet, and annas 11 dry. Rates of about Re. 1 and annas 10 were fixed for 100 acres by the Zemindar.
18	Nagwah	...	...	...	...	0 12 0	0 8 0	...	...	...	...	604 acres. Much land on the slope.
19	Kharar	...	...	...	...	0 14 0	0 9 6	...	...	...	...	715 "
20	Kurawah	...	...	...	...	0 13 0	0 10 0	...	...	...	...	120 "
21	Kheri Ghani	0 9 0	0 6 0	...	...	...	...	...	...	...	...	...

	1	2	3	4	5	6	7	8	9	10		1	2	3	4	5	6	7	8	9	10	11	12	13	14		
	Boanah	...	...	...	...	...	...	...	...	...	...	Basi	...	...	...	...	...	Tandah	...	...	...	...	...	...	...
	Habibpur Sikri	...	...	...	...	...	...	...	...	...	...	Bahanah	...	...	...	...	...	Todah	...	...	...	...	...	...	...
	Husepur	...	...	...	...	...	...	...	...	...	...	Husehab Bamhara	...	...	...	...	...	Khazarpur	...	...	...	...	...	...	...
	Jaolah	...	...	...	...	...	...	...	...	...	...	Rasulpur	...	...	...	...	...	Risoli Naglah	...	...	...	...	...	...	...
	Kaipur Aterna	...	...	...	...	...	...	...	...	...	...	Saltanpur	...	...	...	...	...	Shahdabad	...	...	...	...	...	...	...
	Rokanpur (uninhabited)	...	...	...	...	...	...	...	...	...	...	Alipur Ateanah	...	...	...	...	...	...	...	...	...	...	...	...	...
	Sarai	...	...	...	...	...	...	...	...	...	...	Mandsoli	...	...	...	...	...	...	...	...	...	...	...	...	...
	Garhmalpur Sikri	...	...	...	...	...	...	...	...	...	...	Nasirpur	...	...	...	...	...	...	...	...	...	...	...	...	...
	Lohanah	...	...	...	...	...	...	...	...	...	...	Well	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mandwarah	...	...	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...	...	...	...
	ESTATES IN HINDUN AND KALNE DOAB.																										
	Basi	...	...	...	...	...	...	...	...	...	...						
	Bahanah	...	...	...	...	...	...	...	...	...	...						
	Tandah	...	...	...	...	...	...	...	...	...	...						
	Todah	...	...	...	...	...	...	...	...	...	...						
	Husehab Bamhara	...	...	...	...	...	...	...	...	...	...						
	Khazarpur	...	...	...	...	...	...	...	...	...	...						
	Rasulpur	...	...	...	...	...	...	...	...	...	...						
	Risoli Naglah	...	...	...	...	...	...	...	...	...	...						
	Saltanpur	...	...	...	...	...	...	...	...	...	...						
	Shahdabad	...	...	...	...	...	...	...	...	...	...						
	Alipur Ateanah	...	...	...	...	...	...	...	...	...	...						
	Mandsoli	...	...	...	...	...	...	...	...	...	...						
	Nasirpur	...	...	...	...	...	...	...	...	...	...						
	Well	...	...	...	...	...	...	...	...	...	...						

PERGUNNAH SHIKARPORE.

The boundaries and area of the pergunnah.—The Pergunnah of Shikarpore is bounded on the north and south by Pergunnahs Bagrah and Boorhanah respectively ; on the east by the Kalee River ; and on the west by the Shamlee Pergunnah. The River Hindun flows through it from north to south, dividing it into two unequal portions.

Numbers of estates.	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigated.	Dry.	Assessment.	Rate per acre of total area.	Rate per acre of assessable area.	Rate per acre of cultivated area.
							Rs.	Rs. As. P.	Rs. As. P.	Rs. As. P.
44 estates east of Hindun ...	45,638	40,133	3,868	36,265	11,748	24,517	66,125	1 7 2	1 10 4	1 13 2
18 estates west of Hindun ...	18,377	14,276	2,054	12,222	9,465	2,762	37,176	2 0 4	2 9 8	3 0 8
Total ...	64,015	54,409	5,922	48,487	21,208	27,279	1,03,301	1 9 10	1 14 4	2 2 1

The Cis-Hindun Portion.—The eastern and larger tract contains land of varying quality, the greater portion being rich loam, which, however, is traversed by two lines of sand. Along the Kalee, too, on the east, and the Hindun on the west, there is poor and broken land on the slope, but this is made up for by the fine khadir, especially on the last-named river. Irrigation too from earthen wells is practicable, and, although in the sandier estates difficult and expensive, is very general. On the whole, then, the soil is good, and it is held for the most part by the very best classes of cultivators—the Jats of the Balean Chaorassi, the Tagas of the twelve townships which lie round Mubarikpore, and the Sanis in the neighbourhood of Shahpore. The proprietors are chiefly Jats, Tagas and Pathans.

The areas and assessments at the former and recent Settlements were as follows :—

Settlement.	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigated.	Dry.	Assessment.	Rate per acre of total area.	Rate per acre of assessable area.	Rate per acre of cultivated area.
							Rs.	Rs. As. P.	Rs. As. P.	Rs. As. P.
Former Settlement,	45,468	37,378	7,519	29,854	...	...	64,727	1 6 9	1 11 8	2 2 8
Present Settlement,	45,638	40,133	3,868	36,265	11,748	24,517	66,125	1 7 2	1 10 4	1 13 2
Difference ...	—170	+2,260	—3,651	+6,411	...	...	+1,398	+0 0 5	—0 1 4	—0 5 6

Circumstances under which the tract was settled.—This tract was settled by Mr. Keene under the impression that the Deobund Branch of the Ganges Canal was shortly to be opened ; and this circumstance, combined with the fact that Settlement operations were carried on during the famine, accounts for the little change that was made in the assessment.

2. *The Cis-Hindun portion not generally eligible for Permanent Settlement.*—The prevailing rent-rates given in Appendix II. show that the present assessment is most moderate, but it is only in very exceptional instances inadequate. Had the

Deobund Branch not been in contemplation, there are many estates which otherwise comply with the prescribed conditions ; but in the face of so important a change in the circumstances of this tract as that which will inevitably follow the introduction of canal irrigation, Permanent Settlement is out of the question, except under the most peculiar circumstances ; for, although the land is, on the whole, good, and the cultivation careful and irrigation general, there is so much land still dry that there is hardly any estate, the capabilities of which will not be increased by one-fifth, if it should receive a moderate share of canal irrigation. There is, indeed, only one estate in this tract which can be confidently recommended for Permanent Settlement, and this estate is recommended not because improvement is unlikely, but because the present jumma is far higher than that of many estates fully watered, and with all the benefits to be derived from the canal.

3. *Only one estate recommended for permanence.*—This single estate is Kakra, the area of which, the assessment, and the incidence of the land revenue are as follows :—

Name of estate.	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigated.	Dry.	Assessment.	Rate per acre on assessable area.	Rate per acre on cultivated area.
							Rs.	Rs. As. P.	Rs. As. P.
Kakra	1,433	1,317	106	1,211	874	537	4,245	3 3 7	3 8 1

This estate, therefore, with more than one-quarter of its area dry, and a considerable proportion of this sand, bears a higher rate of assessment than with one or two exceptions the most fully irrigated estates in any other pergunnah in the district, and indeed the assessment of this pergunnah suggests the doubt whether even the most fully assessed estates in other and as is universally acknowledged superior tracts, pay the proportion of land revenue which might fairly be required of them; for, notwithstanding the high rate of this and similar assessments, the village papers themselves show that these assessments are light.

4. *Increase of declared assets since Settlement.*—As an example, I take the Jat township of Goelah. Out of an assessable area of 1,841 acres, 1,747 are under cultivation. Of these 857 (not quite one-half) are irrigated, and of the dry area 205 acres are sandy soil. Mr. Keene reduced the old jumma of Rs. 4,199 to Rs. 4,141, being at the rate of Rs. 2-5-4 per acre on the cultivation—a high assessment for an estate with so large a proportion of unirrigated land. But high as Mr. Keene's assessments often are compared with those of other pergunnahs, the nikasis show that they are moderate, and the rent-roll of Goelah has for five years averaged three times the assessment ; and the irrigated rate of Rs. 1-4 per kutchha beegah, or Rs. 7-8 per acre, fixed by me last year in commutation in this and other similar estates in the vicinity, was promptly followed by a rate of Rs. 1-9 fixed by arbitration for land distant from the village. There were not, as far as I know, at the time of Settlement data to warrant an assessment much above that fixed by Mr. Keene ; but there are now plenty of facts to authorize a very substantial increase, and a moderate share of canal irrigation will certainly enable this prosperous township to bear with ease an assessment rate as high as that of Kakra.

5. *With reference to Deobund Branch a Temporary Settlement recommended.*—It is of course impossible at present to ascertain what estates the Deobund Branch will affect ; but recent orders in the Irrigation Department show that long-talked-of project is now certain to be carried out; and, this being the case, the Permanent Settlement of this tract must be delayed ; for, with the exception of Kakra, there is no estate eligible under the 80 per cent. rule, the assets of which will not be very largely increased by canal irrigation. I would therefore recommend that the Settlement of this tract

be sanctioned for 20 years—a period which will allow of the development of irrigation from the Deobund Branch, if that work should be speedily commenced. In making this recommendation, I need hardly explain that I have looked to the general character of the assessment, and that there are, in this tract, as in most others, estates which are assessed at very much lower rates than their neighbours. Here, as in most other pergunnahs in the district, the openness and honesty which have, as a rule, characterized the Bhyacharah communities stand out in marked contrast to the conduct of wealthy zemindars; and although Mr. Keene took the greatest care that even Jat communities should not be assessed above half assets, he has not been invariably successful in bringing up the standard of zemindaree estates and correcting the entries, which appear to have been false and against Government in proportion as the zemindar was rich and powerful.

6. *The general features and area of the Trans-Hindun portion.*—To the west of the Hindun are situated 18 estates, owned and cultivated almost entirely by Jat communities. The level upland is of nearly unvarying excellence, and the low-lying land along the river is, on the whole, good. The only positively inferior soil, therefore, is that which lies on the slope towards the river. Irrigation from masonry and earthen wells was general long before the Kalarpur Branch of the Eastern Jumna Canal was opened, and the extension of canal irrigation to this tract must have been due more to the desire of the Canal Department to substitute canal for well irrigation, and to collect high water-rates from an industrious population, than to any wish to improve the cultivation of the tract. Indeed, in the estates to the south, in which water is most required, the supply is so uncertain that the rajbaha is of little use; and it is a subject of regret that here, as elsewhere in this district, canal water has been wasted in fertile neighbourhoods which do not require it, while close by there are still arid tracts, the value of which would be doubled by a more enlightened system of distribution.

As far as can be discovered, this circle had, when Mr. Keene saw it, changed but little since the former Settlement, when it was assessed by Mr. Glyn, thirty years before. The subjoined statement shows the areas and the incidence of the assessment according to the papers of the old Settlement as revised by Sir Henry Elliot, and those of the new Settlement concluded by Mr. Keene. Unfortunately enough no data regarding the area under irrigation at last Settlement are procurable; but, to judge from the jummas which were paid with ease during the thirty years which Mr. Glyn's assessment lasted, irrigation must have been nearly as universal as it is now.

Settlement.	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigated.	Dry.	Assessment.	Rate per acre of total area.	Rate per acre of assessable area.	Rate per acre of cultivated area.
							Rs.	Rs. As. P.	Rs. As. P.	Rs. As. P.
Former Settlement ...	18,475	12,409	1,704	10,705	...	...	41,045	2 3 6	3 4 11	3 13 4
Present Settlement ...	18,377	14,276	2,054	12,222	9,460	2,762	37,176	2 0 4	2 9 8	3 0 8
Difference ...	—98	+1,867	+350	+1,517	...	...	—3,869	—0 3 2	—0 11 3	—0 12 8

7. *Fitness for Permanent Settlement considered.*—Of the eighteen estates which compose this fine circle, seven are ineligible for Permanent Settlement, because less than 80 per cent. of the assessable area was under cultivation at the time of Settlement. It therefore only remains to consider whether the eleven estates which are left comply with all the required conditions. The rent-rates which Mr. Keene assumed to be suitable for land in this circle were Rs. 7-4-0 per acre, or Rs. 1-3-4 per kutchah beegah, on irrigation; and Rs. 3 per acre, or annas 8 per kutchah beegah, for unirrigated land. The dry land is of such varying quality that it is difficult to fix any uniform rate which shall suit the lands of different estates, but the rate which was assumed appears to be both safe and suitable enough throughout the tract. That the wet rate is most

moderate is shown not only by those at present in force throughout this circle, but by the only rates which were recorded in Sir Henry Elliot's notes,—those, namely, of the Bhyacharah village of Sissaoli, which more than thirty years ago, even if the Meerut District beegah and not that of the village be taken as the standard, were Rs. 6-14-0 per acre for cultivated land, and Rs. 4-6-0 for culturable waste. In roughly testing Mr. Keene's assessments, I have assumed the rent-rate for wet land, which has been clearly shown to be moderate, not only in this tract, but in every highly cultivated neighbourhood throughout the district; and, applying this rate of Rs. 7-8-0 per acre to the irrigated area, and one of Rs. 3-12 to the dry, I have tested the assessments at which Mr. Keene arrived. And I may remark in passing that the No. II. Statements in no way do justice either to Mr. Keene's system or to its results; for in these papers this pergunnah and Boorhanah have been divided into circles unknown to Mr. Keene, and to the soil areas were applied rates framed by other officers for other and distant tracts.

8. *Seven estates recommended for Permanent Settlement in Trans-Hindun tract.*—The result of my scrutiny is that the following estates are in every way eligible for Permanent Settlement, inasmuch as they are highly cultivated, generally irrigated, and more or less fully assessed:—

Names of estates.	Total area in acres.		Total assessable area.	Culturable waste.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate per acre on as- sessable area.			Rate per acre on culti- vated area.			Remarks.
									Ra.	As.	P.	Ra.	As.	P.	
1. Bhaorah Khoord,	767	688		63	626	626	...	2,436	3	8	8	3	14	3	On the slope.
2. Sisaoli ...	2,867	1,818		95	1,723	1,627	96	7,308	4	0	4	4	3	10	
3. Sheopore ...	200	128		15	113	78	35	310	2	6	9	2	11	11	
4. Alawalpore ...	518	470		29	441	433	8	1,491	3	2	11	3	6	1	
5. Garhee Nowabad,	635	501		20	481	431	50	1,563	3	1	11	3	3	3	
6. Mohamad pore,															On the slope.
Rai Singh ..	1,146	894		87	807	567	240	2,487	3	12	6	3	1	4	
7. Mundabhar ...	1,054	961		46	915	843	72	3,004	3	2	0	3	4	5	
Total ...	6,707	5,460		354	5,106	4,605	501	18,539	3	6	6	3	10	3	

There is in the assessment of some of these estates a greater inequality than is perhaps desirable; but at the time of revision a Permanent Settlement was not contemplated, and the non-disturbance of existing obligations was held to be of more consequence than the equalization of the Government demand.

9. *Four estates eligible under the rules excluded from Permanent Settlement.*—The estates in this circle which I propose to exclude from Permanent Settlement are:—

Names of estates.	Total area in acres.		Total assessable area.	Culturable waste.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate per acre of assessable area.			Rate per acre of cultivated area.	
									Ra.	As.	P.	Ra.	
1. Bhaorah Kalan ...	2,887	2,523	234	2,289	1,730	559	6,589	2	9	9	2	14	1
2. Jeitpur ...	395	353	31	321	296	25	1,008	2	13	10	3	2	3
3. Saotu ...	1,046	729	88	641	343	298	1,625	2	3	8	2	8	7
4. Kheri Sundyan ...	541	501	30	471	340	131	1,437	2	13	11	3	0	6
Total ...	4,869	4,105	383	3,722	2,709	1,013	10,659	2	9	6	2	13	9

With the exception of Jeitpur, all these estates have a considerable dry area, which a better distribution of canal water will greatly improve. Jeitpur, on the other hand, owes the lowness of the present assessment to the depressed state of the village at the time of Settlement; and, as this depression was due entirely to the consequence of

misconduct during the mutiny, it cannot be held to constitute any ground for a permanent lowering of the Government demand.

10. *Abstract of proposals made regarding the Shikarpore Pergunnah.*—Of the 62 estates, then, which compose the Shikarpore Pergunnah, 13 are ineligible for Permanent Settlement, inasmuch as less than 80 per cent. of the assessable area is at present under cultivation. Of the 49 which remain, one estate east of the Hindun and seven west of that river are recommended for Permanent Settlement, while 37 east of the Hindun and four to the west of that river are excluded.

The areas and incidence of the assessments in these three classes of estates are as follows:—

Numbers of estates.	Total area in acria.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigated.	Dry.	Assessment.	Rate per acre of total area.	Rate per acre of assessable area.	Rate per acre of cultivated area.
							Rs.	Rs. As. P.	Rs. As. P.	Rs. As. P.
Eight estates recommended for Permanent Settlement ...	8,140	6,777	460	6,317	5,479	838	22,844	2 12 11	3 5 11	3 9 10
Forty-one estates eligible under the 80 per cent. rule, excluded from Permanent Settlement ...	43,349	38,678	3,100	35,578	12,770	22,808	67,644	1 9 0	1 12 0	1 14 5
Thirteen estates with less than 80 per cent. of the assessable area cultivated ...	12,526	8,954	2,362	6,592	2,959	3,633	12,813	1 0 4	1 6 11	1 15 1
Pergunnah Total ...	64,015	54,409	5,922	48,487	21,208	27,279	1,03,301	1 9 10	1 14 4	2 2 1

It is recommended that the assessment of the eight estates be fixed in permanence in the manner proposed with reference to the permanently settled estates in Kandhlah.

A. CADELL,
Settlement Officer.

The 9th February, 1870.

APPENDIX I.

List of Estates in Pergunnah Shikarpore.

49 estates with 80 per cent. of the assessable area under cultivation.	8 estates recommended for Permanent Settlement.	1. Bhaorah Khoord.	5. Kakra.
		2. Sisoili.	6. Garhi Nanabad.
13 estates with less than 80 per cent. of the assessable area under cultivation and ineligible for Permanent Settlement.	41 estates, the exclusion of which from Permanent Settlement is recommended.	3. Sheopur.	7. Mahomedpur Rai Singh.
		4. Alawalpur.	8. Mundabhar.
		1. Adampur.	22. Saotu.
		2. Alayarpur.	23. Salaru.
		3. Alayarpur Pati, Mobarikpur.	24. Sohnjee, 12 biswaha.
		4. Basdhara.	25. Sohnjee, 8 biswaha.
		5. Bahadurpur Garhi.	26. Shahpur, Zonardar.
		6. Bhaora Kalan.	27. Shahjudi.
		7. Paparhouli.	28. Shoron Pati, Peer Bakhsh.
		8. Palrah.	29. Ditto Sheo Singh.
		9. Palri.	30. Ditto Hursahal.
		10. Pur Balean.	31. Kutbah.
		11. Purah.	32. Karaodi.
		12. Jaitpur.	33. Kaserwa.
		13. Jiwnah.	34. Kalianpur.
		14. Chandpur.	35. Kheri Sundiyan.
		15. Hazarnagar.	36. Goelah.
		16. Khubanpur.	37. Mubarikpur.
		17. Dabal.	38. Mahomedpur Zonardar.
		18. Dinkarpur.	39. Mandaoli.
		19. Dolahrah.	40. Morkohuka.
		20. Dhanayan.	41. Nizampur.
		21. Rasulpur.	
		1. Anchaorah.	7. Sadaruddinagar.
		2. Basi.	8. Alampur Sherpur.
		3. Bahramgarh, alias Ghafur-garh.	9. Alampur.
		4. Khanpur.	10. Umarpur.
		5. Dhindaoli, Afghanistan.	11. Kutas.
		6. Shikarpore.	12. Kamalpur.
			13. Halaoli.

APPENDIX II.

STATEMENT SHOWING RENT-RATES IN PERGUNNAH SHIKARPORE.

The rent-rates are for the kutcha beegah of the district=*one-sixth* of an acre.

Number.	Name of Village.	Fixed at Settlement by Deputy Collector.			Fixed since Settlement by private agreement.			Fixed in Court.			Remarks regarding rent-rates fixed by private agreement and in Court.		
		Wet.	Dry.	Bhoor	All round.	Wet.	Dry.	Bhoor.	Wet.	Dry.		Bhoor.	
ESTATES WEST OF HEDDER.													
1	Bhaorah Khurd	...	...	...	...	1 4 0	...	...	...	...	...	95 acres.
2	Bhaorah Kalan	...	...	...	...	0 14 6	0 9 0	...	...	...	...	692 " Irrigation is overstated, so that the distributed rates are low.
3	Jaitpur	...	...	...	...	1 6 0	0 12 0	...	...	...	...	92 " nearly one-third of the estate.
4	Khanpur	...	...	...	...	1 0 0	0 8 0	...	...	...	...	11 " "
5	Sisaloli	...	...	...	...	1 6 0	0 14 0	...	...	...	...	642 " In Sir Henry Elliot's notes the rates are recorded Rs. 1-6 on cultivation and as 14 on waste; but it is not stated whether the kutcha beegah was the beegah of the people, or that of Meerut, to which district this pergunnah then belonged.
6	Sawtu	...	0 8 0	0 6 0	0 4 0	...	1 2 0	0 10 0	...	...	...	These rates are levied for 130 acres.
7	Sheopur	...	...	...	...	1 5 0	0 12 0	...	...	...	...	91 acres.
8	Shikarpore	...	...	...	...	0 15 0	0 8 0	...	...	...	...	705 " Irrigation appears to be overstated, and much land is on the slope.
9	Sadaruddinagar	...	...	...	...	1 1 0	0 9 0	...	...	...	...	80 acres. Some land on the slope.
10	Alampur	...	...	...	...	0 15 0	0 8 0	...	...	...	...	31 " Much land on the slope.
11	Chak Alampur	...	...	...	...	0 8 0	...	...	...	...	...	34 " Land entered wet, but it is poor land on the slope towards the river.
12	Alawalpur	...	...	...	...	1 8 0	...	...	...	...	...	55 acres.
13	Ghafurgarh	...	...	...	...	1 2 0	0 9 0	...	...	...	...	217 " Some land on slope.
14	Kheri Sundiyan	...	...	...	...	1 2 0	0 10 0	...	...	...	...	89 " "
15	Garhi Nanabad	...	...	...	...	1 0 0	0 8 0	...	1 1 6	...	...	For 317 acres. The rate fixed in Court was arranged by the parties. In this estate there are as high rates as anywhere in the circle, but the average is lowered partly by the consideration shown to favoured cultivators and partly by the slope of the land.
16	Mahomedpur, Rai Singh	...	...	...	...	1 1 0	0 9 0	...	...	...	...	216 acres. A good deal of land on the slope.
17	Mundbhar	...	...	...	...	1 4 0	0 14 0	...	...	...	...	398 " "
18	Halaslee	...	...	...	...	1 1 0	0 9 6	...	1 2 0	0 9 0	...	390 " In Court for 28 acres. Much land on slope.

APPENDIX II

STATEMENT SHOWING RENT-RATES IN PERGUNNAH SHIKARPORE.

The rent-rates are for the kulcha beegah of the district—one-sixth of an acre.

Number.	Name of Village.	Fixed as Settlements by Deputy Collector.			Fixed since Settlement by private agreement.				Fixed in Court.			Remarks regarding rent-rates fixed by private agreement and in Court.	
		Wet.	Dry.	Bhoor.	All round.	Wet.	Dry.	Bhoor.	Wet.	Dry.	Bhoor.		
1st CLASS ESTATES EAST OF HINDUN.													
1	Alayarpur	...	...	...	...	1 18 0	...	...	...	...	...	9 acres.
2	Alayarpur Pati, Mobarikpur	...	...	...	...	1 0 8	0 12 0	...	...	...	...	18 "
3	Shahpur ...	...	...	...	...	2 2 0	0 18 0	...	1 1 0	0 10 0	0 6 0	In commutation for 260 acres, on basis of nikas of 5 years, less 10 per cent.
4	Shoron Pati, Peer Bakhsah	...	...	...	...	1 0 0	0 8 0	...	...	...	...	54 acres.
5	Ditto Pati, Sheo Singh	...	...	...	...	1 2 0	0 10 0	...	...	...	...	83 "
6	Ditto Pati, Harsahal	...	...	...	...	1 2 0	...	0 6 0	1 4 0	...	...	By agreement for 54 acres. In commutation for 37 acres held by non-resident cultivators.
7	Kakrah	...	...	...	...	1 4 0	0 8 0	...	...	...	...	94 acres.
8	Kutbah	...	...	...	...	1 2 0	0 10 0	...	...	...	...	143 "
9	Kaserwa	...	...	...	...	...	...	...	...	...	...	57 "
10	Goelah	...	...	...	...	1 4 0	0 9 0	...	1 4 0	1 0 6	...	188 acres by agreement, and for 40 acres in commutation. The Rs. 1-9-0 rate was fixed by the parties.
11	Mubarikpur	...	...	...	...	1 2 0	0 12 0	...	1 2 0	0 12 0	...	143 acres.
12	Basi	...	...	...	...	1 8 0	0 12 0	...	...	...	...	14 "
2nd CLASS ESTATES EAST OF HINDUN.													
1	Adampur...	...	...	...	...	0 14 0	0 8 0	...	0 12 0	0 8 0	...	445 acres. by private agreement; for 76 acres in commutation on basis of nikas.
2	Badcharah	...	...	...	...	0 12 0	7 0	...	...	...	...	187 acres.
3	Bahadurpur Garhi	...	...	...	...	1 0 0	0 10 0	...	...	...	...	176 "
4	Palrah ...	...	...	...	...	1 0 0	0 9 0	...	1 0 0	0 8 0	...	198 " by agreement. For 91 acres in commutation, 400 acres.
5	Palri ...	...	...	...	...	...	...	...	1 1 0	0 10 0	...	1,123 acres by agreement. In Court 380 acres.
6	Pur Balann	...	...	...	...	1 2 0	0 9 0	0 5 4	1 0 0	0 9 0	0 5 0	
		...	...	...	...	1 0 0	...	...	1 2 0	0 10 0	0 7 0	

148 acres; but as irrigation is understated the rates are apparently higher than they really are. Rs. 1-1 and As. 9) are probably more correct. Rates have been fixed in commutation for 39 acres.
In commutation for 64 acres.

7	Parah ...	...	...	...	...	...	...	...	1 4 0	0 10 0	...	1 0 0	0 9 0	0 9 0	0 6 6
8	Hasur Nagar	...	...	...	...	...	...	...	1 0 0	0 7 0	...	1 2 0	0 12 0	...	...
									1 1 0	0 10 0	...	...	...	...	...
9	Khanapur	...	...	...	...	...	...	...	1 0 0	0 6 0	...	...	...	...	162 acres.
10	Dinkarpur	...	...	...	...	...	...	...	1 0 0	0 6 0	...	...	...	...	43 acres.
11	Dolahrh...	...	...	...	...	...	...	...	0 14 0	0 8 0	...	...	...	...	50 "
12	Dhanayan	...	...	...	...	...	...	...	1 0 0	0 6 0	...	...	...	...	248 "
13	Dhandaoli	...	...	...	...	...	...	...	0 12 0	0 8 0	...	...	...	...	178 "
14	Ranpur...	...	...	...	...	...	...	...	1 0 0	0 10 0	...	...	...	...	78 "
15	Shahjad ...	...	...	...	...	...	...	...	0 12 0	...	0 5 0	...	...	...	8 "
16	Sohnji, 12 biswabs	...	...	...	...	...	...	...	1 0 0	0 10 0	...	...	...	...	145 "
									...	0 9 0	...	...	...	...
17	Sohnji, 8 biswabs	...	...	...	...	...	...	...	1 0 0	0 10 0	...	...	...	...	117 "
18	Umarpur...	...	...	...	...	...	...	...	1 2 0	0 10 0	...	...	...	...	107 "
19	Karodi ...	...	...	...	...	...	...	...	...	0 9 0	...	...	...	...	20 "
20	Kaliapur	...	...	...	...	...	...	...	0 14 0	...	0 4 0	...	...	...	56 "
21	Kamalpur	...	...	...	...	...	...	...	0 15 0	0 8 6	...	...	...	...	449 "
22	Nizampur	...	...	...	...	...	...	...	1 2 0	0 10 0	...	...	...	...	22 "
3RD CLASS RATES BASED ON HINDU.															
1	Paparhaoli	...	...	...	...	...	...	...	0 10 0	...	0 5 0	...	...	...	160 "
2	Jiwah ...	...	...	...	...	...	...	...	0 12 0	0 9 0	0 4 0	...	...	...	1,140 " fixed at Settlement.
3	Chandpur	...	...	...	...	...	...	...	0 12 0	0 6 0	0 4 6	...	...	...	228 "
4	Dabal ...	...	...	...	...	...	...	...	0 12 0	0 6 0	...	...	...	...	161 "
5	Salaru ...	...	...	...	...	...	...	...	0 12 0	0 6 0	...	...	...	...	125 "
6	Mahomedpur Zonardar	...	...	...	...	...	...	...	...	0 7 6	...	...	...	...	49 "
7	Mandaoli...	...	...	...	...	...	...	...	...	...	...	...	...	...	No money rents.
8	Markohukah	...	...	...	...	...	...	...	1 0 0	0 8 6	...	...	...	...	122 acres.
9	Ancharah	...	...	...	...	...	...	...	0 12 0	0 6 0	...	...	...	...	288 "
10	Katas ...	...	...	...	...	...	...	...	0 12 0	0 6 0	...	...	...	...	52 "

WITH the foregoing letter are submitted—

Reports on Pergunnahs Boorhanah, Shikarpore, and Kandhlah ; on the Shamlee Tehseel ; and on Charthawal and Bagra in the Moozuffernuggur Tehseel.

Books containing Inspection Notes regarding the estates in the nine pergunnahs eligible under the 80 per cent. rule for Permanent Settlement.

SHAMLEE TEHSEEL.

1. THE Shamlee Tehseel comprises the whole of the north-west portion of the district, and contains the Pergunnahs of Shamlee, Thanah Bhowan, Kairanah, Jhinjhanah and Bidoulee. The last-named pergunnah, inhabited for the most part by Goojurs, has been excluded from Permanent Settlement on account of the general backwardness of the tract ; while in Jhinjhanah and Kairanah comparatively few estates are eligible under the 80 per cent. rule. These few are almost without exception the canal-irrigated villages to the south-east of the former pergunnah and the east and south-east of the latter. By far the greater portion of both pergunnahs is as unfitted for Permanent Settlement as is Bidoulee ; and, like Bidoulee, they are held for the most part by lawless Goojurs, or by Jats and Rajpoots who are little more orderly if slightly more industrious.

In Thanah Bhowan and Shamlee, as will be shown in detail later, most of the estates which are in every way eligible for Permanent Settlement are those owned by Jat communities. In this tract, as in Kandhlah, the Jats, and close behind them the reclaimed Goojur communities have worked with an energy which has left nearly all other classes far behind ; and all that can at present be prudently done towards a Permanent Settlement is to fix in permanence the assessments of such fully developed estates and to allow time for their neighbours to reach the same high state of advancement.

2. Excluding the exceptional Pergunnah of Bidoulee, the following number of estates in this Tehseel is eligible for Permanent Settlement, inasmuch as they had at Settlement 80 per cent. of the culturable area under cultivation :—

Names of estates.					Eligible under the 80 per cent. rule.	Ineligible.	Total.
Shamlee	...	...	...	...	65	11	76
Thanah Bhowan...	...	...	...	...	26	35	61
Jhinjhanah	...	...	...	...	17	47	64
Kairanah	...	...	...	...	26	31	57
Total					134	124	258

I have already in my Report on Pergunnah Kandhlah described Mr. Colvin's system of assessment, and I need not therefore go into minute details regarding the settlement of these pergunnahs. As far as I have been able to ascertain, the present assessment is, as a rule, just both to Government and the people ; and my work has been strictly confined to the selection of those estates which are eligible under both the rules for

Permanent Settlement. The result of my scrutiny is that comparatively few estates have been recommended, but the exclusion of so large a proportion is due almost entirely to the uncertainty regarding canal irrigation, not to any general inadequacy of the assessment. Here and there of course there are under-assessed estates, but in nearly every case in which a low jumma was fixed there were good grounds for consideration. I must refer to my pergunnah note-books for the detailed reasons which guided me in excluding some estates, and in recommending others for Permanent Settlement.

3. In these note-books too will be found the estimates furnished by the Executive Engineer of the Eastern Jumna Canal regarding the probable extension of canal irrigation. These estimates, acknowledged to be rough, have become the less trustworthy, because new principles of distribution have been authoritatively announced since they were framed. Independent of this very important circumstance, moreover, the transferable rights in irrigation which exist on the Eastern Jumna Canal render it more difficult than it otherwise would be for a Canal Officer to assert with any pretence to accuracy what estates are likely to be irrigated. An estate may have been excluded from all probable schemes of extension, and yet if the zemindar manages to buy a few outlets his estate forthwith acquires all the benefits of canal irrigation ; and the more the restriction of canal irrigation is enforced the more outlets will be thrown into the market, and the greater chance there will be of new villages receiving canal water.

This extensive sale of outlets has, it is true, been hitherto prevented, because Government has been in the habit of cancelling instead of buying up or forcing the sale of the rights for which the people had formerly paid. It is, however, likely that views fairer to the people, and it may be the action of the Civil Courts, will lead to the introduction of a more just mode of procedure ; and if the new principle of distribution be persisted in, we may safely look forward to the introduction of canal water into many estates, the irrigation of which was not contemplated by the Canal Officers. Unfortunately, too, where the lines of rajbhas have been definitively fixed, it is impossible to place implicit confidence in the estimates which have been made ; for in framing them the new principles have been overlooked, and the department seems resolved to repeat the old mistakes, and to flood those tracts which least require irrigation, while the most dry and parched estates are left unhelped. This being the case, the only safe course to follow would be, not to settle permanently any estate, the assets of which can be increased by canal irrigation to a greater extent than 20 per cent. of the assets. I have not adopted this principle in its entirety, but I have thought it necessary to exclude estates which, although not promised canal irrigation, are situated so close to new channels and are in such obvious want of help that it is hardly to be expected that their claims will be overlooked.

4. *Pergunnah Jhinjhanah*.—The Pergunnah of Jhinjhanah is for the most part held by Rajpoots and Goojars, and the cultivation was at Settlement so backward that only 17 estates out of 64 are eligible for Permanent Settlement under the 80 per cent. rule. Into these 17 estates again, situated with two exceptions in the south-east corner of the pergunnah, canal irrigation has been comparatively recently introduced, and, as might have been expected, the Jat villages previously carefully cultivated, at once reached a very high standard of prosperity ; while, notwithstanding the great advantages placed within their reach, the Rajpoot and Goojar villages are still somewhat backward. Of the Jat estates, too, one or two still lay behind, and their assessments are still below the standard to which their neighbours have attained.

5. *Five estates recommended for Permanent Settlement, 12 excluded*.—The following statements show those estates which are recommended for Permanent Settlement on

the present terms, and those which are at present ineligible, either owing to the prospect of increased irrigation from the canal or on account of the lowness of the present assessment.

Recommended for Permanent Settlement.

Numbers and names of estates.	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate per acre on assess- able area.			Rate per acre on culti- vated area.		
								Ra.	A.	P.	Ra.	A.	P.
1. Oon ...	2,919	2,517	496	2,021	1,546	475	5,400	2	2	4	2	10	9
2. Poor ...	996	891	131	760	733	27	2,311	2	12	7½	3	1	1
3. Thanah ...	1,285	1,023	110	913	801	112	2,812	2	12	0	3	1	3½
4. Tapranah Jatou ...	968	799	118	681	500	181	1,651	2	1	1	2	6	9½
5. Doolakheri ...	877	740	81	659	653	6	1,575	2	2	8	2	6	3
Total ...	7,036	5,970	936	5,034	4,233	801	13,749	2	4	10	2	11	8

Not recommended for Permanent Settlement.

Numbers and names of estates.	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate per acre on assessable area.			Rate per acre on cultivated area.		
								Ra.	A.	P.	Ra.	A.	P.
1. Ambehtah ...	784	652	47	605	534	71	900	1	6	1	1	7	9½
2. Pelkha ...	820	648	81	567	462	105	1,354	2	1	5	2	6	2½
3. Tapranah Goojran ...	474	393	52	341	152	189	641	1	10	1	1	14	1
4. Tapranah Afghanan...	1,216	1,067	214	853	591	262	1,250	1	2	9	1	7	5½
5. Durgahpore ...	971	622	107	515	394	121	1,024	1	10	4	1	15	10
6. Bahutpore ...	494	337	61	276	275	1	450	1	5	4	1	10	1
7. Isa Mazrah ...	13	18	...	18	11	7	20	1	1	9	1	1	9
8. Kherki ...	504	427	81	346	312	34	800	1	14	0	2	5	0
9. Garhi Mian Bhai Khan,	84	79	9	70	70	...	148	1	14	0	2	1	10
10. Malhendee ...	1,654	1,489	253	1,236	1,012	224	3,100	2	1	4	2	8	1½
11. Naonagli ...	660	592	88	504	453	51	1,200	2	0	5	2	6	1
12. Hoshangpore ...	316	234	29	205	113	92	401	1	11	5	1	15	3½
Total ...	8,006	6,558	1,022	5,536	4,379	1,157	11,288	1	11	6	2	0	7

6. *Past and Present Settlements.*—The present jumma of the whole 27 estates shows a considerable advance over that previously fixed, and a still more decided increase to the assessment may confidently be looked for when the Settlement of this tract shall again be revised. The statistics of the present and former Settlements are as follows :—

Settlement.	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate per acre of total area.	Rate per acre on assessable area.	Rate per acre on cultivated area.
							Rs.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Former Settlement,	15,033	13,658	3,736	10,923	...	...	25,671	1 11 4	1 14 1	2 5 7
Present Settlement,	16,954	12,528	1,958	10,570	8,612	1,958	28,382	1 10 10	2 4 3	2 11 0
Difference ...	+1,921	—1,130	—778	—353	...	...	+2,711	0 0 6	0 6 2	0 5 5

7. *Pergunnah Kairanah—Postponement of Permanent Settlement recommended.*—In Kairanah, still more than in Jhinjhanah, the bulk of the land is owned or cultivated by Goojars, and 31 estates out of 57 are ineligible for Permanent Settlement under the 80 per cent. rule. Of the 26 estates which are eligible, all with a few trifling exceptions are owned and cultivated by Goojars; and even were there not the prospect of a very substantial increase to the area irrigated by the canal, I should be merely adopting the views of the Settling Officer in recommending the exclusion of the whole tract from Permanent Settlement; for this is just the tract in which of all others the effect of a sudden enhancement of the Government demand was most to be feared. The Goojar communities, under the encouraging influence of canal irrigation, were beginning to extend and improve their cultivation, and if not entirely to abandon their ancient lawlessness, to become at least more dependent for their support upon agriculture. Notwithstanding, therefore, the large increase to the assets of this tract, Mr. Colvin was very cautious in raising the Government demand, and the result is an assessment which, suitable in most cases for a limited term of years, is not fitted for permanence. Indeed Mr. Colvin distinctly states, and with special reference it would seem to this south-east corner of canal-irrigated estates, that, "Had it not been for fear of too rapid an increase in the demand, I should have increased the jumma considerably more than I have done." The considerations which were amply sufficient to justify a low temporary assessment form no ground for making that low assessment permanent, and I therefore recommend that in this pergunnah Permanent Settlement should be delayed.

In order that the incidence of the present assessment and the possibility of increased canal irrigation may be clearly seen, I give below the usual statement regarding the 26 estates which are eligible under the 80 per cent. rule, but which are not recommended for Permanent Settlement :—

Numbers and names of estates.	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate per acre on assessable area.	Rate per acre on cultivated area.
							Rs.	Rs. A. P.	Rs. A. P.
1. Oonchagaon ...	1,162	957	60	897	863	34	2,000	2 1 5½	2 3 8
2. Erti ...	722	579	33	546	489	57	1,200	2 1 2	2 3 2
3. Budhupoora ...	516	468	51	417	197	290	600	1 4 6	1 7 0½
4. Barala ...	785	725	53	672	439	233	1,200	1 10 6	1 12 7
5. Bhorapati Musulmanan.	1,255	1,132	209	923	798	125	1,700	1 8 0½	1 13 5½
6. Banehra ...	520	462	86	376	376	...	700	1 8 3	1 13 9½
7. Panjith ...	1,271	1,116	212	904	753	151	1,500	1 5 6	1 10 6½
8. Jaganpore ...	585	475	42	433	286	147	831	1 12 0	1 14 8½
9. Chukaleepore ...	9	9	...	9	9	...	12	1 5 4	1 5 4
10. Chuk Khandela ...	12	12	...	12	7	5	16	1 5 4	1 5 4
11. Ditto Kheri Kafshadaz.	15	15	1	14	...	14	10	0 10 8	0 11 5
12. Ditto, <i>alias</i> Titarwara.	17	15	...	15	4	11	10	0 10 8	0 10 8
13. Aleepore ...	537	465	61	404	396	8	1,050	2 4 2	2 9 7
14. Ghazeepore ...	542	478	62	416	36	330	650	1 5 9	1 9 0
15. Kishorepore ...	456	421	18	403	403	...	455	1 1 3½	1 2 1
16. Khandela ...	743	660	55	605	473	132	1,200	1 13 1	1 15 9
17. Kheri Bucha ...	1,211	972	99	873	655	218	2,000	2 0 11	2 4 8
18. Kheri Kafshadaz ...	512	437	8	429	247	182	780	1 12 7	1 13 5½
19. Kairana Taraf Darmian.	1,878	1,576	174	1,402	1,092	310	2,017	1 4 6	1 7 0
20. Ditto Sadhoo ...	1,341	1,180	119	1,061	945	116	1,691	1 7 0	1 9 6½
21. Ditto Kasim ...	1,759	1,331	145	1,186	1,055	131	1,888	1 6 8	1 9 6
22. Ditto Kanoongoyan...	1,215	1,085	109	976	850	126	1,410	1 4 10	1 7 1
23. Ditto Mehal Milk Muzbitah.	3,490	2,495	252	2,243	1,775	468	3,485	1 6 4	1 8 1
24. Gogwan ...	1,661	1,516	257	1,359	916	343	1,850	1 8 6	1 7 6
25. Hengokheri, 6½ biswaha.	119	117	19	98	53	45	224	1 14 8	2 4 7
26. Ditto, 13½ biswaha ...	287	282	40	242	160	82	554	1 15 6	2 4 8
Total ...	22,620	18,980	2,165	16,815	13,327	3,488	29,034	1 8 6	1 11 8

8. *Past and Present Settlements compared.*—Notwithstanding the great care which has been taken not to press hardly on the Goojur Zemindars, there has been a very considerable advance since last Settlement, and there is little doubt that when the assessment is again revised a still greater enhancement will be possible without in the slightest degree distressing the proprietors, who owe their present prosperity in some degree, it is true, to their own partial reformation, but chiefly, there can be no doubt, to the new water-courses constructed at the expense of Government. To facilitate

comparison, the statistics of the present and former Settlement for the 26 estates are given below :—

Settlement.	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate per acre on total area.	Rate per acre on assessable area.	Rate per acre on cultivated area.
Former Settlement,	21,902	17,618	4,163	13,455	...	...	Rs. 24,628	Rs. 1 2 0	Rs. 1 6 4	Rs. 1 13 3
Present Settlement,	22,620	18,980	2,165	16,815	13,327	3,488	29,034	1 4 6	1 8 6	1 11 8
Difference ...	+711	+1,362	-1,998	+3,360	...	...	+4,406	+0 2 6	+0 2 2	0 1 7

It will be seen that the incidence of the present jumma on the cultivated area is less than that of the old one, and when the increased facilities for irrigation are considered it can hardly be doubted that the present assessment, however suitable for a term of years in a tract held by the least industrious castes, is not fit to be declared permanent.

9. *Pergunnahs Shamlee and Thanah Bhowm.*—The Pergunnahs of Thanah Bhowm and Shamlee are both intersected from north to south by the River Kirsanee, which divides both pergunnahs into two very distinct tracts, the larger one to the west fully irrigated by the Eastern Jumna Canal, while the dry tract to the east has hitherto been left almost entirely dependent on wells, the sinking of which is in this tract difficult and expensive.

10. *Thanah Bhowm—Comparison of Tracts to East and West of Kirsanee.*—In Thanah Bhowm especially the distinction between the two tracts is very marked, as the subjoined statements, giving the wet and dry areas and the incidence of the assessment, show :—

Numbers of estates.	Total area in acres.	Total assessable area.	Culturable area.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate per acre on total area.	Rate per acre on assessable area.	Rate per acre on cultivated area.
							Rs.	Rs. As. P.	Rs. As. P.	Rs. As. P.
36 estates west of Kirsanee River ...	37,709	25,721	9,032	16,689	14,484	2,205	46,270	1 3 8	1 12 9	2 12 4
28 estates east of Kirsanee River ...	19,881	16,000	3,297	12,703	6,487	6,216	22,397	1 2 0	1 6 5	1 12 2
Total ...	57,590	41,721	12,329	29,392	20,971	8,421	68,667	1 3 1	1 10 4	2 5 5

These figures are very remarkable, and, while they show the fertility of the cultivated area to the west of the river, they indicate other symptoms which are not so satisfactory,—the enormous proportion of the so-called culturable waste, and the altogether unusual difference between the incidence of the assessment on the assessable and cultivated areas. The area entered barren must of course be largely added to by the construction of every new canal and the completion of new means of communication ; but the enormous proportion of old and new fallow can only be owing to the gradual falling out of cultivation of land which has been injured by over-irrigation.

Indeed the portion west of the Kirsanee appears to be deteriorating rather than improving, and it is entirely owing to the rise in prices and the consequent rise in rents that there was not a serious diminution in the Government demand.

11. *Comparison of Past and Present Settlements of Tract to the West of the Kirsanee.*—The following statement shows the condition of this tract according to the Settlement Papers of Mr. Thornton and Mr. Colvin :—

Settlement.	Total area in acre.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate per acre on assessable area.	Rate per acre on cultivated area.	Remarks.
							Ra.	Ra. As. P.	R. As. P.	
Former Settlement ...	32,466	28,275	7,288	20,987	...	...	42,522	1 8 1	2 0 5	Jalalabad and Jafirpore maffes estates, not included in former Settlement, have been excluded from this statement.
Present Settlement ...	32,996	25,677	9,008	16,669	14,484	2,235	40,511	1 9 3	2 6 11	
Difference ...	+530	-2,598	+1,720	-4,318	...	...	-2,011	+0 1 2	+0 6 6	

The diminution of the assessable area is considerable, but is in a great measure due to the occupation of arable land by public works; much, however, is no doubt owing to deterioration, and much of the so-called culturable waste is for the present ruined by reh.

12. *Seven Estates recommended for Permanent Settlement.*—Of the 36 estates in this tract, 9 are eligible for Permanent Settlement, and of these I recommend the exclusion of only two, the Goojur Estate of Paltheri, and the Zemindaree Township of Ahmadpore, the assessment of which is extremely low owing to the depressed state of the village after the mutiny.

The estates recommended for Permanent Settlement are :—

Numbers and names of estates.	Total area in acre.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate per acre on assessable area.	Rate per acre on cultivated area.
							Ra.	Ra. As. P.	Ra. As. P.
1. Aurangabad ...	1,011	842	132	710	697	13	1,736	2 1 0	2 7 2
2. Buntah ...	623	479	95	384	384	...	1,600	2 1 5	2 9 8
3. Khanpore ...	540	391	69	322	315	7	951	2 6 11	2 15 3
4. Goranah ...	420	290	25	265	265	...	728	2 8 2	2 11 11
5. Madlipore ...	644	415	75	340	340	...	1,000	2 6 6	2 15 1
6. Yarpore ...	1,012	623	69	554	525	29	1,860	2 11 5	3 0 9
7. Yonisipore ...	119	94	4	90	90	...	264	2 12 11	2 14 11
Total ...	4,869	3,134	469	2,665	2,616	49	7,539	2 6 6	2 13 3

13. Those estates of which I recommend the exclusion from Permanent Settlement are :—

Names of estates.		Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate per acre on assessable area.	Rate per acre on cultivated area.
Ahmadpore	...	419	377	48	329	217	12	Rs. 456	Rs. As. P. 1 10 4	Rs. As. P. 1 15 10
Faltheri	...	50	50	...	50	50	...	112	2 3 10	2 3 10
Total	...	469	327	48	279	267	12	568	1 11 10	2 0 7

Although I have recommended seven estates for Permanent Settlement, as in every way eligible under the rules, there is grave reason to doubt whether it would not be better for the people that Permanent Settlement should be delayed. As I have already stated, these estates are rather deteriorating than making progress, and so little do the people desire permanence that the owners of only two out of the seven estates could be persuaded by Mr. Martin to sign the agreements which bound them to pay their present assessments beyond the original limit of thirty years.

14. *Tract to the East of the Kirsanee.*—To the east of the river lies a tract of few natural advantages; the soil is of fair quality, but the sinking of earthen wells is difficult and expensive; the cultivators too are for the most part Rajpoots, whose progress has not been rapid. It might have been thought that this was the tract in which above all others canal water would have been most useful and was most certain to be given, but although the once frequent earthen wells to the west of the river have long since been closed by the canal, and although the neighbourhood to the east was well-supplied with masonry wells, yet the Canal Department has carefully avoided the tract which most required its aid, and has lavished canal water in needless profusion over a fertile country which hardly wanted help. The consequence is that, while reh and swamp are doing much injury beyond the Kirsanee, and while the rajbuha to the east irrigates large tracts fully secured by masonry wells, the dry and arid tract in the middle of the pergunnah has been left without that share of canal irrigation which it so much requires.

The whole tract therefore is, as a rule, in a backward state, and the best and most prosperous townships have been so lightly assessed that only five estates can be recommended for Permanent Settlement, and with reference to these it might be well if the Canal Department were asked to consider once more whether the assets are not likely to be affected by a more enlightened system of distribution from the Eastern Jumna Canal.

15. *Five estates recommended for Permanent Settlement.*—The estates in this tract eligible under the 80 per cent. rule which are recommended for Permanent Settlement are as follows :—

Numbers and names of estates.		Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate per acre on assessable area.	Rate per acre on cultivated area.
1.	Pawarkherah	...	195	119	3	116	77	39	Rs. 217	Rs. As. P. 1 13 2
2.	Titarsi	...	450	334	15	319	201	118	600	1 12 9
3.	Thanah Bhowan, Pati Chowdhrian	...	514	397	56	341	214	127	692	1 11 11
4.	Mulanpore	...	110	94	15	79	55	24	150	1 9 6½
5.	Niralsi or Qadirgurb	...	596	510	69	441	153	288	753	1 7 7½
Total	...	1,865	1,454	158	1,296	700	596	2,412	1 10 7	1 13 9

16. The assessments of the following 12 estates, on the other hand, are, for the various reasons given in the pergunnah note-books, unsuited for permanence :—

Numbers and names of estates.	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate per acre on assessable area.	Rate per acre on cultivated area.
							Rs.	Rs. As. P.	Rs. As. P.
1. Ismailpore ...	221	192	17	175	20	155	308	1 1 2	1 2 10
2. Bagh Bangla ...	46	42	3	40	11	8	79	1 14 1	1 15 7
3. Bhundurah ...	958	865	130	735	321	414	700	0 12 11	0 15 3
4. Bhalsanee Islampore ...	2,544	2,291	392	1,899	1,415	484	2,569	1 1 11	4 5 8
5. Kheocaree ...	855	589	68	521	245	276	727	1 3 9	1 6 4
6. Jalalabad ...	255	233	19	204	77	127	313	0 15 3	1 0 9
7. Chandanamaul ...	1,200	889	117	772	164	606	1,150	1 4 8½	1 7 10
8. Umarpore ...	1,30	832	142	690	362	328	1,116	1 5 5½	1 9 10½
9. Ferozpora Kasapore ...	540	470	55	415	260	155	779	1 10 6	1 14 0½
10. Loharee ...	923	816	111	705	407	298	1,860	2 0 6½	2 5 8
11. Niraiah ...	703	643	41	601	426	176	877	1 8 4	1 10 0
12. Ladomasrah ...	648	522	86	436	209	227	860	1 10 4	1 15 7
Total ..	9,638	8,373	1,180	7,193	3,940	3,253	11,036	1 5 1	1 8 6

17. *Estates in Pergunnah classified.*—The result is that in the whole Pergunnah of Thannah Bhow, of 26 estates eligible for Permanent Settlement under the 80 per cent. rule, 12 are recommended for Permanent Settlement, while 14 have been excluded. The areas, assessment, and the incidence of the Government demand on the three classes thus formed, are shown below :—

Numbers of estates.	Total area in acres.		Total assessable area.						Rate per acre on total area.		Rate per acre on assessable area.		Rate per acre on cultivated area.			
12 Estates recommended for Permanent Settlement.	6,224	4,588	637	3,951	3,316	845	9,951	1	9	6	2	2	3	2		
14 Estates eligible under the 80 per cent. rule but not recommended.	10,102	8,700	1,328	7,472	4,207	3,265	11,604	1	2	5	1	5	4	1	8	10
35 Estates entirely ineligible.	32,797	26,233	9,901	16,337	12,302	4,135	35,949	1	1	6	1	5	11	2	3	2
Total, exclusive of mafice.	49,123	39,526	11,766	27,770	19,725	8,045	57,504	1	2	9	1	7	3	2	1	2

18. *Pergunnah Shamlee—Comparison of Tracts to East and West of Kirsanee.*—The Pergunnah of Shamlee is in most respects similar to Thannah Bhow, which it adjoins on the south; Shamlee, however, is superior, and both quality of soil and style of cultivation steadily improve as the southern boundary is approached. Shamlee like Thanah Bhow is intersected by the River Kirsanee, and there are the same general features which characterize the two tracts—over-irrigation and gradual deterioration to the west of the river in the neighbourhood of the Eastern Jumna Canal, and a want of irrigation to the east of the river, especially in the northern portion of the tract. To the south, however, earthen wells are practicable; and the land being held for the most part by powerful Jat brotherhoods, the tract is one of the most fertile in the district, and pays a high revenue. The Kalarpoor Branch of the Eastern Jumna Canal irrigates a few estates on the eastern boundary.

The areas, assessment and incidence of the Government demand in these two tracts are shown below :—

Numbers of estates.	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate per acre on total area.	Rate per acre on assessable area.	Rate per acre in cultivated area.
							Rs.	Rs. As. P.	Rs. As. P.	Rs. As. P.
43 Estates west of Kirsanee River.	37,376	29,372	4,559	24,813	19,371	5,442	64,725	1 11 8	2 3 3	2 9 9
33 Estates east of the river.	27,391	23,282	2,640	20,642	11,852	8,790	55,332	2 0 4	2 6 0	2 10 11
Total ...	64,767	52,654	7,199	45,455	31,223	14,232	1,20,057	1 13 8	2 4 6	2 10 3

19. *The incidence of assessments in the two tracts.*—We have thus the extraordinary phenomenon of a fertile plain, almost entirely irrigated from the canal, paying a lower revenue per acre than the adjoining tract inferior in natural capabilities and not superior in the castes of cultivators by whom the land is tilled, and with quite two-fifths of the area dry. Nor is the assessment of the canal-irrigated tract low; but over-irrigation has done its deadly work. The land is slowly but steadily deteriorating, and malaria has enfeebled the population. Indeed there can be little question that if half of the canal water which has been poured over this tract had been reserved for some other neighbourhood in which masonry wells were less numerous and earthen wells were less easily dug, the Government demand might have been as high in the Jat villages watered by the Canal as it is in the Kodanah Circle, east of the Kirsanee in which “reh” is unknown, and in which cultivation is carried on with an energy for which it is useless to look in a fever-stricken peasantry.

20. *Comparison of Past and Present Settlements.*—Both tracts were very highly cultivated at last Settlement, and in neither has there been any great advance.

Estates and Settlement.	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Assessment.	Rate per acre on total area.	Rate per acre on assessable area.	Rate per acre on cultivated area.
						Rs. As. P.	Rs. As. P.	Rs. As. P.
43 estates west of Kir- sanee. { Former Settlement,	37,963	29,618	3,478	26,140	63,111	1 10 7	2 2 1	2 6 8
{ Present Settlement,	37,376	29,372	4,559	24,813	64,725	1 11 8	2 3 3	2 9 9
{ Difference ...	-587	-246	+1,081	-1,227	+1,614	+0 1 1	+0 1 2	+0 3 1
33 estates east of Kir- sanee. { Former Settlement,	27,870	22,972	2,567	20,405	57,226	2 0 10	2 7 10	2 12 10
{ Present Settlement,	27,391	23,282	2,640	20,642	55,332	2 0 4	2 6 0	2 10 11
{ Difference ...	-489	+310	+87	+237	-1,894	-0 0 6	-0 1 10	-0 1 11

21. *Effects of over-irrigation considered.*—In the canal-irrigated tract, therefore, the cultivated area is decreasing owing to the steady inroads of swamp and reh; and as irrigation is now so general, little improvement can be looked for in the great majority of estates from a larger supply of canal water. Indeed in many cases we must look for improvement to a systematic lessening of the canal-irrigated area, and to the benefit which is likely to follow from a return of the people to the use of wells. It would, I am convinced, be difficult to overestimate the advantage which has been derived by many estates in this neighbourhood from a judicious supply of canal water, but it would be also difficult to overstate the injury which has been caused to the immediate neighbourhood of the canal by the short-sighted policy of deluging low-lying tracts with the sole object of collecting high water-rates over a limited area, and

without paying the slightest attention to the wants of more distant lands, to the health of the people, or to the indirect revenue which a more enlightened system of distribution would secure to Government. Notwithstanding, however, these defects, the revenue rates are high, the land is nearly all irrigable, and although fields are year by year dropping out of cultivation, those as yet unaffected are carefully cultivated and bear the best kinds of crops.

22. *Twelve Estates recommended for Permanent Settlement.*—In this tract, as might be expected, only the outlying estates can look for much more irrigation from the Canal; and of the 32 estates eligible under the 80 per cent. rule for Permanent Settlement, comparatively few are excluded on account of prospective increase of irrigation. Most of them are either Goojar villages which have not yet reached the high standard of cultivation which characterizes the best Goojar townships in the south of Shamlee and in Kandhlah, or are Jat estates which have, for one reason or other, been assessed at lower rates than their neighbours. In this way, out of 32 estates in the canal-irrigated tract eligible under the 80 per cent. rule, only 12 have been found to be in every way suited for Permanent Settlement. These are—

Numbers and names of estates.	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate per acre on assessable area.	Rate per acre on cultivated area.
							Rs.	Rs. As. P.	Rs. As. P.
1. Bulwah, Pati Musalmanan,	693	577	57	520	520	...	1,443	2 8 0	2 12 5
2. Bulwah, Pati Hinduan ...	618	451	8	443	296	147	1,600	3 8 9	3 9 9
3. Banat, Pati Ramzanalee...	696	240	36	204	191	13	600	2 8 0	2 15 0
4. Banat, Pati Mohar Singh,	283	248	29	219	190	29	660	2 10 7	2 0 3
5. Tajpur Simbhalka ...	693	556	53	503	445	58	1,800	3 3 9	3 9 3
6. Jhal, Pati Guthwala ...	532	416	40	376	308	68	1,200	2 14 2	3 3 1
7. Dhanayana ...	486	347	9	338	338	...	1,000	2 14 1	2 15 4
8. Salawur ...	1,830	1,430	122	1,308	1,252	56	4,000	2 12 9	3 0 11
9. Shamlee, Pati Bhugwan Singh ...	834	586	80	506	437	69	1,607	2 11 10	3 2 10
10. Karori ...	675	532	35	497	420	77	1,300	2 7 1	2 9 11
11. Gurheni ...	1,728	1,317	245	1,072	1,006	66	3,200	2 6 10	2 15 9
12. Mihrampār ...	347	285	33	252	209	43	736	2 9 4	2 14 9
Total ...	9,415	6,985	747	6,238	5,612	626	19,146	2 11 10	3 1 1

23. *Twenty-one excluded.*—Throughout this tract there appears to be an entire absence of any eagerness for Permanent Settlement. The late high prices may have influenced the people's views, but certainly before the drought no one expressed the slightest anxiety for permanence, and the majority objected most strongly to a Per-

Note.—For only 4 out of the 12 estates could the zamindars be induced to sign a Permanent Settlement Durkhast.

manent Settlement which would preclude any future re-adjustment of the Government demand. Even to the most industrious Jat landlords, the chance of deterioration appears to more than outweigh the prospect of improvement, and there can be little wonder that, considering the uncertainty which still exists regarding the distribution of canal water, and the increase of reh, landlords paying a high revenue should see as much cause for fear as for hope in a Settlement which is never to be revised. The owners, therefore, of the following estates, which I propose to exclude from Permanent

Settlement, will suffer no great disappointment from the course which has been adopted regarding them :—

Numbers and names of estates.	Total area in acra.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate per acre on assessable area.			Rate per acre on cultivated area.		
							Rs.	Rs.	As.	P.	Rs.	As.	P.
1. Badheo ...	343	304	51	253	215	38	750	2	7	6	2	15	5
2. Barlajat ...	863	544	45	499	252	247	1,100	2	0	4	2	3	3
3. Bamnaoli ...	411	383	61	322	178	144	752	1	15	5	2	5	4
4. Bhainswal ...	3,529	2,941	564	2,377	2,263	114	7,060	2	6	5	2	15	6
5. Titaoli ...	1,559	1,355	150	1,205	990	215	2,900	2	2	3	2	6	6
6. Jandheri ...	971	540	102	438	231	207	700	1	4	9	1	9	7
7. Sikundrah ...	826	683	71	612	463	149	1,154	1	11	0	1	14	2
8. Sentah, Pati Raj- rup ...	80	50	2	48	23	25	96	1	14	9	2	0	0
9. Shamlee, Pati Jawahir Singh ...	822	675	109	566	356	210	1,590	2	5	8	2	12	11
10. Shamlee, Pati Ghasi Ram ...	834	620	44	576	472	104	1,558	2	8	2	2	11	3
11. Shamashpur ...	227	162	14	148	105	43	300	1	13	7	2	0	5
12. Shekhopurah ...	441	354	3	351	219	132	851	2	6	5	2	6	9
13. Kaserwa Khurd ...	709	620	10	610	360	250	1,500	2	5	0	2	7	4
14. Kaserwa Kalan...	931	723	7	716	662	54	2,013	2	12	6	2	13	0
15. Kunnu Kherah ...	1,290	1,089	120	969	899	70	2,394	2	3	2	2	7	6
16. Kheri Kurmu ...	1,771	1,361	211	1,150	883	267	3,097	2	4	5	2	11	1
17. Garhshaestpur...	181	169	10	159	146	13	200	2	3	11	1	4	1
18. Ghogarpur ...	269	237	23	214	199	15	473	1	15	11	2	3	4
19. Laloen ...	1,669	1,522	207	1,315	1,062	253	3,475	2	4	6	2	10	3
20. Mundeth ...	966	674	75	599	519	80	1,600	2	6	0	2	10	9
21. Mahabatpur ...	380	316	41	275	226	49	696	2	3	3	2	8	6
Total ...	19,072	15,322	1,920	13,402	10,723	2,679	34,259	2	3	9	2	8	11

24. *Condition of the Tract to the East of Kirsanee, and reasons which prevent the Permanent Settlement of the majority of Estates.*—Of the 33 estates lying to the east of the river, 32 are eligible for Permanent Settlement under the 80 per cent. rule, and of these estates the assessment is so full and fair that had there been no disturbing cause nearly all of them might have been settled permanently. Many of the finest of these estates were settled by Sir Henry Elliot at a time when far more than the two-thirds of Mr. Thornton's Settlement were appropriated to the State. In some of these estates a considerable reduction was therefore necessary, and this accounts for the lowering of the Government demand. Even now, however, the assessment is in nearly every case sufficiently full, and with a few exceptions, the whole tract might have been permanently settled, were it not that a new rajbaha running through this portion of the pergunnah from north to south is about to be opened. As two-fifths of the whole area were entered dry at Settlement, the introduction of canal irrigation will have a marked effect, and it may be confidently expected that a supply of water for one-third of the cultivated area will bring this portion of the Shamlee Pergunnah up to the high level of the adjoining tract in Shikarpore, the most highly assessed and one of the most fertile portions of the district. Unfortunately, however, it would seem to be the intention of the Irrigation Department to commit the same errors in the distribution from the new rajbaha which have been productive of so much injury in the western portion of the pergunnah. It is proposed to deluge with canal water fully irrigated estates, while here as elsewhere many dry estates at no great distance from the line of the rajbaha are to be left unaided. I have not, however, felt myself bound to be entirely guided by the confessedly uncertain information received from the Irrigation Department, but have taken for granted that Canal Officers will, in future, adhere to some extent to those common-sense principles of distribution which have recently been so authoritatively laid down.

25. *Six Estates recommended for Permanent Settlement.*—Owing to the extension of the Yarpore Rajbaha, only six of the 30 otherwise eligible estates can be recommended for Permanent Settlement; and regarding the first, fourth and fifth it might be

well if the Canal Department were again to consider whether there is any prospect of canal irrigation being extended to them. The six estates are—

Numbers and names of estates.	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate per acre on assessable area.	Rate per acre on cultivated area.	Remarks.
							Ra.	Ra. As. P.	Ra. As. P.	
1. Bootrari ...	645	500	61	439	802	137	1,000	2 0 0	2 4 5	On the Kirsanee.
2. Bhaju ...	2,271	2,070	104	1,966	1,469	497	6,536	3 0 11	3 3 7	
3. Chaonsah,	461	402	24	378	320	58	1,268	3 1 3	3 5 8	
4. Kabraot ...	754	532	71	461	245	216	1,100	2 1 1	2 6 2	On the Kirsanee.
5. Karaodah,	812	749	89	660	396	264	2,000	2 10 9	3 0 6	
6. Kodanah ...	2,372	1,494	124	1,370	805	565	4,263	2 13 8	3 1 9	On the Kirsanee.
Total ...	7,315	5,747	473	5,274	3,537	1,737	15,967	2 12 5	3 0 5	

The malgoozaree and cultivated rates are thus very high, nearly as high as those of the finest canal-irrigated estates, and practically much heavier; for three out of the six estates are situated on the banks of the Kirsanee, and in them much of the dry land is on the slope.

26. *Twenty-six estates excluded.*—Of the 26 estates, the exclusion of which from Permanent Settlement is recommended, the great majority have a very considerable dry area, the irrigation of which will largely increase the assets of such estates. In a few cases the assessment is unsuited for permanence on account of its lowness; but, as a rule, Permanent Settlement must be delayed owing to the prospect of extensive irrigation from the Yarpore Extension Rajbaha now in course of construction, and from which the irrigation of over 7,000 acres in this tract is promised.

Numbers and names of estates.	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate per acre on assessable area.	Rate per acre on cultivated area.
							Ra.	Ra. As. P.	Ra. As. P.
1. Adampore...	740	641	32	609	225	384	1,795	2 12 10	2 15 2
2. Babri ...	2,800	2,469	479	1,990	670	1,320	4,500	1 13 2	2 4 2
3. Bantikhera, Pati Jatan.	786	628	42	586	154	432	1,206	1 14 9	2 0 11
4. Bantikhera, Pati Rangaren.	1,106	948	54	894	311	683	1,600	1 11 0	1 12 8
5. Banherah ...	896	753	114	639	454	185	2,027	2 11 1	3 2 9
6. Bootrara h, Pati Afghanan.	804	730	84	646	420	226	1,450	1 15 10	2 3 11
7. Bootrara h, Pati Jatan.	500	408	23	385	279	106	1,100	2 11 2	2 13 8
8. Bhaori ...	1,562	1,364	235	1,129	555	574	3,288	2 6 7	2 14 1
9. Beeka Mazra,	506	454	49	405	246	159	1,272	2 12 10	3 2 2
10. Beeki Deh...	343	253	5	248	111	137	500	1 15 7	2 0 3
11. Beeki Kodanah.	308	261	12	249	207	42	638	2 7 1	2 9 0
12. Jamal pore Nagli.	475	308	16	292	92	200	666	2 2 7	2 4 6
13. Chuk Khanpore.	42	41	2	39	12	27	100	2 7 0	2 9 0
14. Chuk Qasimpore.	115	113	15	98	13	85	161	1 6 9	1 10 3
15. Khanpore ...	720	661	26	635	466	169	1,550	2 5 6	2 7 1
16. Sontah ...	1,333	1,221	233	988	875	113	3,157	2 9 4	3 3 1
17. Qasimpore...	324	279	4	275	201	74	788	2 13 2	2 13 10
18. Karijarheri,	496	449	33	416	282	134	1,158	2 9 3	2 12 6
19. Koormali ...	697	630	116	514	351	163	1,604	2 8 9	3 1 11
20. Kheri Bairagi.	267	219	30	189	144	45	430	1 15 5	2 4 5
21. Kheri Pati,	414	378	42	336	174	162	900	2 6 1	2 10 10
22. Kalree ...	2,572	2,104	309	1,795	720	1,075	3,400	1 9 10	1 14 4
23. Gouharpore,	394	334	64	270	155	115	600	1 12 9	2 3 6
24. Lank ...	3,346	3,032	272	2,760	1,647	1,113	7,322	2 6 8	2 10 5
25. Mahdudpore, Pati Afghanan.	128	123	10	113	51	62	145	1 2 10	1 4 6
26. Mahdudpore Pati Jatan.	155	136	1	135	53	82	220	1 9 10	1 10 1
Total ...	21,829	18,937	2,302	16,635	8,768	7,867	41,577	2 3 2	2 8 0

27. *Classification of Estates in Shamlee Pergunnah.*—In the Pergunnah of Shamlee, then, out of 65 estates eligible for Permanent Settlement under the 80 per cent. rule, the assessments of 18 are in every way suited for permanence, leaving 47 eligible under the 80 per cent. rule, but not recommended, and 11 entirely ineligible.

The areas and assessments of, and the incidence of the Government demand on these three classes of estates are as follows :—

N

18 estates recommended for Permanent Settlement.	16,730	12,732	1,220	11,512	9,149	2,363	35,113	2	1	7	2	12	2	3	0	10
47 estates eligible under the 80 per cent. rule, but not recommended.	40,901	34,359	4,222	30,037	19,491	10,546	75,836	1	13	8	2	3	5	2	3	5
11 estates entirely ineligible.	7,136	5,663	1,757	3,906	2,583	1,323	9,108	1	4	5	1	9	9	2	5	4
Total ...	64,767	52,654	7,199	45,455	31,223	14,232	1,20,057	1	13	8	2	4	6	2	10	3

28. *Thirty-five Estates recommended for Permanent Settlement in Shamlee Tehseel.*—In the whole Tehseel there have been recommended for Permanent Settlement 35 estates,—5 in Jhinjhanah, 12 in Thanah Bhowan, and 18 in Shamlee, making a total of 35 estates, with the following total area and assessment :—

Numbers of estates.	Total area in acres.	Total assessable area.	Culturable waste.													
				Rate per acre on cultivated area.												
				P. Rs. As. P.												
5 estates in Jhin-jhanah.	7,036	5,970	936	5,034	4,233	901	13,749	2	4	10	2	11	8			
12 estates in Thanah Bhowan.	6,234	4,588	627	3,961	2,316	645	9,951	2	2	8	2	8	2			
18 estates in Shamlee.	16,730	12,732	1,220	11,512	9,149	2,363	35,113	2	12	2	3	0	10			
Total, 35 estates...	30,000	23,290	2,783	20,507	16,698	3,909	58,813	2	8	5	3	13	11			

A. CADELL,
Settlement Officer.

APPENDIX No. 1 A.

List of Estates in Pergunnah Shamlee.

Sixty-five estates with 80 per cent. of the assessable area under cultivation and eligible for Permanent Settlement.	Eighteen estates recommended for Permanent Settlement.	<ol style="list-style-type: none"> 1. Balwa, Pati Musalmanan. 2. Balwa, Pati Hinduan. 3. Banat, Pati Ramzan Ali. 4. Banat, Pati Mohar Singh. 5. Bootraee Pati. 6. Bhaju. 7. Tajpur Simbhalka. 8. Jhal Pati, Guthwala. 9. Chaonsa. 	<ol style="list-style-type: none"> 10. Dhanaina. 11. Salawar. 12. Shamlee, Pati Bhagwan Singh. 13. Kabraout. 14. Karouda. 15. Karori. 16. Koondana. 17. Goorahoe. 18. Miharmpur.
Eleven estates with less than 80 per cent. of the assessable area under cultivation and ineligible for Permanent Settlement.	Forty-seven estates, the exclusion of which from Permanent Settlement is recommended.	<ol style="list-style-type: none"> 1. Adampur. 2. Babri. 3. Badheo. 4. Barlajat. 5. Barnaouli. 6. Buntikhara, Pati Jatan. 7. Buntikhara, Pati Rangaron. 8. Banehra. 9. Bootraa, Pati Afghanan. 10. Bootraa, Pati Jatan. 11. Bhaori. 12. Bhainswal. 13. Beeka Mosrah. 14. Beeki Deh. 15. Beeki Koodana. 16. Titauli. 17. Jamalpur Nugli. 18. Jandheri. 19. Chak Khanpur. 20. Chak Kasimpur. 21. Khanpur. 22. Sikandra. 23. Soontah. 24. Sentah, Pati Rajrup. 	<ol style="list-style-type: none"> 25. Shamlee, Pati Jawahir Singh. 26. Shamli, Pati Ghaseeram. 27. Shamasbpur. 28. Shekhupura. 29. Kasimpur. 30. Kaserwa Khurd. 31. Kaserwah Kalan. 32. Kanjarheroo. 33. Kanunu Kera. 34. Koormali. 35. Kheri Bairagi. 36. Kheri Pati. 37. Kheri Karma. 38. Kheri. 39. Qurb Shayaastpur. 40. Gouharpore. 41. Ghogarpur. 42. Lank. 43. Laloon. 44. Mahdudpur, Pati Afghanan. 45. Mahdudpur, Pati Jatan. 46. Mandeth. 47. Mahabatpur.
		<ol style="list-style-type: none"> 1. Banat, Pati Sawal Singh. 2. Banat, Pati Seelaput. 3. Jalalpur. 4. Jhal, Pati Keerat. 5. Khanpur Talba Masra. 6. Sika. 	<ol style="list-style-type: none"> 7. Sentah, Pati Basse Khan. 8. Sentah, Pati Gomani. 9. Shamli, Pati Mahaldar. 10. Fatehpur. 11. Neamatullapur.

APPENDIX No. 1 B.

List of Estates in Pergunnah Thanah Bhown.

Twenty-six estates with 80 per cent. of the assessable area under cultivation and eligible for Permanent Settlement.	Fourteen estates recommended for Permanent Settlement.	<ol style="list-style-type: none"> 1. Aorangabad. 2. Buntah. 3. Pawarkherah. 4. Titarsi. 5. Thanah Bhown, Pati Choudharam. 6. Kanpore. 	<ol style="list-style-type: none"> 7. Goorana. 8. Madlipore. 9. Mullanpore. 10. Niralsi or Qadigarth. 11. Yarpore. 12. Yonispore.
	Fourteen estates Permanent Settlement is recommended.	<ol style="list-style-type: none"> 1. Ahmadpore. 2. Ismailpore. 3. Bagh Bangla. 4. Bhandurah. 5. Bhainsani, Islampore. 6. Baltheroo. 7. Khesoree. 	<ol style="list-style-type: none"> 8. Chandinamal. 9. Omarpore. 10. Ferozpore, Esapora. 11. Ladomanree. 12. Loharoo. 13. Jalalabad. 14. Niralsi or Marukheroo.

APPENDIX No. 1 B.—(Concluded.)

List of Estates in Pergunnah Thanah Bhow.—(Concluded.)

Thirty-five estates with less than 80 per cent. of the assessable area under cultivation and ineligible for Permanent Settlement.			
		1. Ahatah Ghousgurh.	
		2. Ambehta Yakubpore.	
		3. Banehra Ooda.	
		4. Thanah Bhown,	Pati
		Masawee.	
		5. Thanah Bhown,	Pati
		Nougawan.	
		6. Thana Bhown, Mahal Mus-	
		buta.	
		7. Thanah Bhown, Mehal Baghian.	
		8. Tarwa.	
		9. Janspore.	
		10. Jasana.	
		11. Jamalpore.	
		12. Dabheres.	
		13. Dookheres, Jamalpore.	
		14. Soonta, Rassulpore.	
		15. Sonjru, Omarpore.	
		16. Abdullapore, Namdarpore.	
		17. Osmanpore, oorf Shekhupore.	
		18. Aleepoora.	
		19. Kadurpore.	
		20. Kaseepore.	
		21. Kasbah Thanah Bhown, Pati	
		Kalroo.	
		22. Khara Gadaee.	
		23. Kailsheekarpore.	
		24. Garhee Abdulla Khan, Pati	
		Pachdu.	
		25. Ditto,	Pati Soyau.
		26. Ditto,	Pati Shashum.
		27. Ditto,	Pati Haftum.
		28. Gogwan.	
		29. Manatmunttee.	
		30. Nagal.	
		31. Nojal Noujhlee.	
		32. Haranwara.	
		33. Harhar, Fatehpore.	
		34. Hind.	
		35. Chuk Kootabpore.	

APPENDIX No. 1 C.

List of Estates in Pergunnah Jhinjhanah eligible under the 80 per cent. rule for Permanent Settlement.

Seventeen estates with 80 per cent. of the assessable area under cultivation and eligible for Permanent Settlement.	Five estates recommended for Permanent Settlement.	<ol style="list-style-type: none"> 1. Oon. 2. Poor. 3. Thanah. 	<ol style="list-style-type: none"> 4. Tapranah Jatan. 5. Doolakheres.
	Twelve estates, the exclusion of which from Permanent Settlement is recommended.	<ol style="list-style-type: none"> 1. Ambehta. 2. Pelkha. 3. Tapranah, Goojran. 4. Tapranah, Afghanan. 5. Durgapore. 6. Rahutpere. 	<ol style="list-style-type: none"> 7. Ksamuzra. 8. Khairkee. 9. Garhee Main, Bhase Khan. 10. Malenbdee. 11. Naunaglee. 12. Hoshanpore.

Rent-rates in Pergunnah Shamlee per Kutcha Begah=one-sixth of an Acre.

No. Ber.	Name of Village.	Rent-rates per kutcha begah fixed at Settlement.			Rent-rates fixed by private agreement at and since Settlement.			Rent-rates fixed in Court.			Remarks regarding rent-rates fixed by private agreement and in Court.		
		Wet.	Dry.	Bhoor.	All round.	Wet.	Dry.	Bhoor.	Wet.	Dry.		Bhoor.	
ESTATES WEST OF THE KIRANER.													
1	Badheo	...	...	...	...	1 0 0	...	...	...	...	...	For 10 acres.
2	Balwah Pati, Musalmanan	...	...	...	...	1 0 0	...	...	...	...	...	" 180 "
3	Balwah Pati, Hinduan	...	...	...	...	1 6 0	0 10 0	0 4 0	...	...	...	" 51 "
4	Barlajat	...	...	...	...	1 0 0	0 8 0	...	...	...	...	" 310 "
5	Bannaoli	...	...	...	...	1 0 0	0 7 0	...	...	...	...	" 262 "
6	Banat Pati, Ramsan Alee	...	...	...	...	0 12 0	...	...	...	...	...	" 46 "
7	Ditto " Mohar Singh	...	...	...	...	0 15 0	0 8 0	...	...	...	...	" 44 "
8	Ditto " Sawai Singh	...	...	...	...	...	...	...	...	...	...	No money rents.
9	Ditto " Silapat	...	...	...	...	...	...	...	...	...	...	Ditto.
10	Bhainswal	...	...	...	...	1 4 6	0 12 0	...	...	...	...	433 acres.
11	Tajpur Simbholkah	...	...	...	...	...	...	...	...	...	...	No money rents.
12	Ticooli	...	...	...	...	...	...	...	...	...	...	Ditto.
13	Jalalpur	...	...	...	...	...	...	...	...	...	...	Ditto.
14	Jhandheri	...	...	...	...	...	...	...	...	...	...	Ditto.
15	Jhal Pati, Ghatwala	...	...	...	...	...	...	...	...	...	...	Ditto.
16	Do, " Kiral...	...	...	...	...	...	...	...	...	...	...	Ditto.
17	Dhanena	...	...	...	...	...	...	...	...	...	...	Ditto.
18	Sika	...	...	...	...	0 12 0	0 9 0	...	...	...	...	220 acres.
19	Sikandrah	...	...	...	...	0 15 0	0 9 0	...	...	...	...	97 "
20	Salawar	...	...	...	...	...	...	...	...	...	...	No money rents.
21	Sainthal Pati, Rajrup	...	...	...	...	...	...	...	...	...	...	Ditto.
22	Ditto " Basi Khan	...	...	...	...	...	...	...	...	...	...	Ditto.
23	Ditto " Gumani	...	...	...	...	...	...	...	...	...	...	Ditto.
24	Shamlee Pati Bhagwan Singh	...	...	...	...	1 0 0	0 8 0	...	...	...	...	217 acres.
25	Ditto " Jawahir Singh	...	...	...	...	1 2 0	0 10 0	...	...	...	...	277 "
26	Ditto " Ghasi Ram	...	...	...	...	1 0 0	0 10 0	...	...	...	...	134 "
27	Ditto " Mahaldar	...	...	...	...	...	...	...	...	...	...	No money rents.
28	Shekhopurah	...	...	...	...	0 14 0	0 9 0	...	...	...	...	211 acres.
29	Karori	...	...	...	...	...	...	...	...	...	...	No money rents.
30	Kaserwah Khurd	...	...	...	...	0 14 0	0 8 0	...	...	...	...	148 acres.
31	Kaserwah Kalan	...	...	...	...	1 4 0	...	...	...	...	...	15 "
32	Kanu Kherah	...	...	...	...	0 15 0	0 8 0	...	...	...	...	28 "
33	Kheri Karma	...	...	...	...	0 14 0	0 8 0	...	...	...	...	592 "

Rent-rates in Pergunnah Thanah Bhown per Kutcha Beegah = one-sixth of an Acre.

No.	Name of Village.	Rent-rates per kutcha beegah fixed at Settlement.			Rent-rates fixed by private agreement since Settlement.			
		Wet.	Dry.	Bheer.	All round.	Wet.	Dry.	Bheer.
ESTATES WEST OF KINSARA.								
1	Ahmadpur ...	...	...	...	...	1 7 0	...	...
2	Ambekah Yachubpur ...	...	...	...	...	...	...	...
3	Arangabad ...	...	...	...	...	0 10 0	...	...
4	Banehra Uda ...	...	...	...	...	0 13 0	0 9 0	...
5	Bustah ...	...	...	...	...	0 13 0	...	...
6	Paltheri ...	...	...	...	...	...	...	...
7	Thanah Bhown Pati, Kalra	...	...	...	...	0 15 0	0 9 0	...
8	Ditto Pati, Naogon	...	...	...	...	...	...	...
9	Ditto Mahal Masbutah	...	...	...	...	...	...	...
10	Ditto " Baghian	...	...	...	...	...	...	...
11	Turrah ...	...	...	...	...	...	...	...
12	Janpur ...	...	...	...	...	...	...	...
13	Jamanah ...	...	...	...	...	...	...	...
14	Jalalabad ...	...	...	...	...	...	...	...
15	Khanpur ...	...	...	...	...	...	...	...
16	Sontah Rampur	...	...	...	...	...	...	...
17	Sonjet Umarpur	...	...	...	...	...	...	...
18	Damanpur ...	...	...	...	...	...	...	...
19	Kadirpur ...	...	...	...	...	...	...	...
20	Qasipur ...	...	...	...	...	...	...	...
21	Kherah Gadai	...	...	...	...	...	...	...
22	Khal Shikarpur	...	...	...	...	...	...	...
23	Garhi Abdullah Khan Pati, Pachda,	...	...	...	...	...	...	...
24	Ditto Pati Siom	...	...	...	...	...	...	...
25	Ditto " Harbom	...	...	...	...	...	...	...
26	Ditto " Harbom	...	...	...	...	...	...	...
27	Godanah ...	...	...	...	...	...	...	...
28	Maddilpur ...	...	...	...	...	...	...	...
29	Manat Manti	...	...	...	...	...	...	...
30	Naojal Naoji	...	...	...	...	...	...	...
31	Harhar Patehpur	...	...	...	...	...	...	...
32	Hindh ...	...	...	...	...	...	...	...

Rent-rates in the Estates of Pergunnah Kairanah eligible under the 80 per cent. rule for Permanent Settlement per Kutcha Beegah=one-sixth of an Acre.

Number.	Name of village.	Rent-rates per kutcha beegah fixed at Settlement.			Rent-rates fixed by private agreement at and since Settlement.				Rent-rates fixed in Court.			Remarks regarding rent-rates fixed by private agreement and in Court.
		Wet.	Dry.	Bhoor.	All round.	Wet.	Dry.	Bhoor.	Wet.	Dry.	Bhoor.	
1	Oonchagon	...	...	...	...	0 9 6	...	...	...	...	...	204 acres.
2	Erdi	...	...	...	...	0 11 6	...	...	...	...	...	100 "
3	Budhopur	...	...	...	...	0 9 0	0 6 0	...	...	...	...	96 "
4	Barala	...	...	...	...	0 10 8	0 6 0	...	...	...	...	260 "
5	Bhura Pati, Mussalmanan	...	...	...	0 6 0	...	...	...	...	...	...	126 "
6	Bhura	...	...	...	...	0 13 0	...	...	...	...	...	77 "
7	Panjit	...	...	...	0 5 6	...	...	...	...	...	...	270 "
8	Jaganpur	...	...	...	0 7 6	...	...	...	...	...	...	190 "
9	Chak Alipur Maruf, Titwararah	...	...	...	...	...	...	...	...	...	...	No money rents.
10	Chak Khandela	...	...	...	0 7 0	...	...	...	...	...	...	4 acres.
11	Chak Kheri Kafshados Maruf, Kairanah.	...	...	...	...	...	...	...	...	...	...	No money rents.
12	Chak Kheri Kafshados Maruf, Titwararah.	...	...	...	...	...	...	...	...	...	...	Ditto.
13	Alipur	...	...	...	...	0 15 0	...	...	...	...	...	52 acres.
14	Ghasipur	...	...	...	...	...	...	...	...	...	...	No money rents.
15	Kishorpur	...	...	...	...	...	...	...	...	...	...	Ditto.
16	Khandela	...	...	...	0 7 7	...	...	...	...	...	...	450 acres.
17	Kheri Bucha	...	...	...	...	0 10 0	0 6 0	...	...	...	...	228 "
18	Kheri Kafshados	...	...	...	...	0 9 0	0 5 0	...	...	...	...	150 "
19	Kairanah Taraf, Darmijan	...	...	...	0 6 6	...	...	...	...	...	...	1,003 acres. Wet rates for annas 14-8, excluding garden land.
20	Kairanah Taraf, Sadbu	...	...	...	0 8 0	...	...	...	...	...	...	367 acres.
21	Kairanah Taraf, Qasim	...	...	...	...	0 10 0	0 6 0	...	...	...	...	382 acres. Wet rates for Re. 1.
22	Kairanah Taraf, Kannugoyan	...	...	...	...	0 11 0	0 7 0	...	...	...	...	250 acres.
23	Kairanah Mahal, Milk Mazbitah	...	...	...	...	1 0 0	...	...	...	...	...	508 "
24	Gogwan	...	...	...	0 5 0	...	...	...	...	...	...	289 "
25	Hing-Kheri 6½ biswahs (uninhabited).	...	...	...	1 0 0	1 4 0	0 11 0	...	...	...	...	56 "
26	Ditto 13½ biswahs	...	...	...	...	0 14 0	0 9 0	...	...	...	...	104 "

As nearly all the money rents in this pergunnah are paid by proprietors, little trust can be placed in them.

**PERGUNNAHS CHARTHAWAL AND BAGRA, OF THE HUZOOR
TEHSEEL.**

Boundaries and general features of the two pergunnahs.—The Pergunnahs of Charthawal and Bagra, of the Huzoor Tehseel, are, for the present, cut off from the irrigation system of the Ganges Canal by the River Kalee, which, with a few villages of the Moozuffernuggur Pergunnah, forms the boundary on the east. On the north Charthawal, the northern pergunnah, adjoins Pergunnahs Katha and Deobund of Saharunpore; and Bagra on the south, is bounded by Shikarpore. To the west of the tract lie Pergunnahs Thanah Bhowan and Shamlee.

The Hindun River runs through the tract from north to south, and cuts off from each pergunnah a portion of about one-third of the whole area. This portion, lying to the west of the Hindun, is irrigated by the Kalarpore Branch of the Eastern Jumna Canal, and some of the estates are little if at all behind those of the splendid circle immediately to the south in Shikarpore between the Hindun and the Kalee. On the other hand, there is as yet no Canal, and wells are comparatively few; so that although the villages to the south and east of Bagra are not much behind the adjoining portion of Shikarpore, the increasing dryness towards the north renders the tract on the whole very decidedly inferior to the southern pergunnah. The soil is on the whole good—as a rule, indeed, it is excellent; and the opening of the Deobund Branch will cause a change in the condition of this tract only slightly less remarkable than that which has taken place on the other side of the Kalee River.

2. *Circumstances of assessment.*—The two pergunnahs were at Settlement assessed by different officers,—Charthawal by Mr. Colvin and Bagra by Mr. Martin; and for this reason it will be better to consider the circumstances of each pergunnah by itself.

3. *The Cis-Hindun portion of Pergunnah Bagra.*—The portion of Bagra lying to the east of the Kalee River contains 56 estates, the area and assessment of which at the Settlements of Mr. Thornton and Mr. Martin are given below :—

Settlement.	Total area in acres.	Total assessable area.	Culturable wastel.	Cultivated area.	Irrigated.	Dry	Assessment.	Rate per acre of total area.	Rate per acre of assessable area.	Rate per acre of cultivated area.
								Rs. A. P.	Rs. A. P.	Rs. A. P.
Former Settlement	40,694	23,717	6,387	27,330	...	...	63,195	1 8 10	1 14 0	2 5 0
Present Settlement	41,153	26,497	5,357	31,140	11,332	19,808	58,451	1 6 9	1 9 7	1 14 0
Difference ...	+ 459	+ 2,780	- 1,030	+ 3,810	...	...	- 4,744	0 2 1	0 4 5	0 7 0

The land of this tract is on the whole good, but there is a small proportion of sand, and to the north and west irrigation is difficult and expensive. On the east, the pergunnah does not extend so far as the Kalee, and the broken land along the river is all in the outlying estates of Pergunnah Moozuffernuggur. Of the townships on the Hindun, again, the most northern of all, Ladwah, is the only one which is inferior; the others are well cultivated and productive estates. The considerable fall in the assessment was hardly necessary; but many estates were, at the time of Settlement, much depressed owing to the drought, and Mr. Keene, who began the Settlement of the pergunnah, recommended that the assessment should be revised after the lapse of five years. This circumstance would of itself be an argument against Permanent Settlement, which is moreover put out of the question by the prospect of the canal irrigation from the Deobund Branch; for there is no estate in the tract, the assets of which will not be largely increased by a moderate supply of canal water. I would therefore recommend that the present assessment be sanctioned as a temporary one for 15 or 20 years, and that it be revised when the irrigation from the Deobund Branch shall have become fully developed.

4. *The tract beyond the Hindun.*—The areas and assessment of the 19 estates lying to the west of the Hindun at the Settlements of Mr. Thornton and Mr. Martin were as follows :—

Settlement.	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate per acre of total area.	Rate per acre of assessable area.	Rate per acre of cultivation.
							Rs.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Former Settlement	14,681	12,804	3,622	9,182	...	...	23,088	9 2	1 12 10	2 8 3
Present Settlement	14,901	12,655	1,757	10,898	7,564	3,334	23,240	1 8 11	1 13 4	2 2 1
Difference ...	+220	-149	-1,865	+1,716	...	...	+152	- 0 0 3	-0 0 6	-0 6 2

The change in the assessment has been very trifling, and indeed in most instances the old assessment was left very much as it stood. That this was the case is unfortunate, for since Mr. Thornton's Settlement canal water has been brought into the pergunnah, and the change due to this cause is very unequal and could hardly be expected exactly to make up for the portion of the assets now relinquished by Government. In some estates, which were fully irrigated from wells before Mr. Thornton's Settlement, relief was called for, notwithstanding the new irrigation from the canal, while other and dry estates have been enormously improved by the large extension of irrigation.

5. *Six estates recommended for Permanent Settlement.*—Although, then, 15 estates west of the Hindun are eligible for Permanent Settlement under the 80 per cent. rule, and in the majority of these no great increase of irrigation can be looked for, I have been able to recommend for Permanent Settlement only 6 estates. It will be seen that these estates are as regards assessment nearly on a level with the adjoining portion of Shikarpore, to which this tract is—the Jat villages at least—exactly similar. To the north the cultivators are Rajpoots, whose turbulence secured them such light assessments in former times that it was not practicable, even if it had been expedient, to raise the Government demand all at once to the level of neighbouring villages owned by more industrious castes.

Recommended for Permanent Settlement.

Names of estates.	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigated.	Dry.	Assessment.	Rate per acre of assessable area.	Rate per acre of cultivation.	Remarks.
							Rs.	Rs. A. P.	Rs. A. P.	
Jasoi ...	1,657	1,482	226	1,256	598	658	2,800	1 14 3	2 3 11	On the river.
Salikheri ...	694	606	20	586	557	29	1,890	3 1 11	3 3 7	
Alipurah ...	662	513	46	467	418	49	1,400	2 11 8	2 15 11	
Talukheri ...	531	475	24	451	311	140	1,570	3 4 10	3 7 8	
Mahmudur Mandan	580	527	40	487	487	..	2,000	3 11 7	4 1 11	
Nawadah ...	323	229	26	203	187	16	600	2 9 11	2 15 3	On the river.
Total ...	1,447	3,832	382	3,450	2,558	892	10,260	2 10 10	2 15 7	

Even in the assessment of some of these estates there is more inequality than is desirable, or than would in all probability have been allowed to remain had it been known at the time of Settlement that the demand then fixed was to be declared permanent; but the difference between a full assessment and that fixed is not sufficient, even in the case of Alipurah, to warrant the exclusion of the estate.

6. *The exclusion from Permanent Settlement of nine Estates recommended.*—The estates which are eligible under the 80 per cent. rule, but which I am unable to recommend for Permanent Settlement—partly on account of the probable increase to the assets by the further extension of canal irrigation, and partly owing to the inadequacy of the present assessment—are the following :—

Names of estates.	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Wet.	Dry.	Assessment.	Rate per acre of assessable area.		Rate per acre of cultivated area.	Remarks.
								Ra.	Ra. A. P.			Ra. Aa. P.
1. Atali ...	924	635	69	566	441	123	1,200	1 14 0	2 1 8	On the slope.	
2. Budhinah Kalan...	2,032	1,551	42	1,509	1,377	232	2,100	2 0 0	2 0 11		
3. Pipalherah ...	1,065	946	91	855	890	265	1,000	1 0 11	1 3 9		
4. Chiraoili ...	371	237	17	220	154	66	440	1 13 8	2 0 0		
5. Chatela ...	1,151	1,042	134	908	775	133	1,200	1 2 5	1 5 2		
6. Dhaolri Patil Dikh- kanah ...	349	330	17	313	...	313	800	0 14 6	0 15 4		
7. Sol njai ...	1,196	1,070	176	894	895	299	2,300	2 2 4	2 9 2		
8. Labardah ...	679	630	39	541	518	23	1,000	1 9 5	1 13 7		
9. Naglah Petorah...	648	549	33	516	418	98	1,200	2 3 0	2 5 3		
Total ...	8,415	6,990	668	6,322	4,768	1,554	11,740	1 10 10	1 13 9		

7. *Recommendations regarding Pergunnah Bagra.*—My recommendations therefore regarding this pergunnah are, that, of the fifteen estates beyond the Hindun eligible under the 80 per cent. rule, six should be settled permanently, and that the Permanent Settlement of the remaining nine be delayed, and that the Settlement of the Cis-Hindun Tract should be sanctioned for a term of fifteen or twenty years, so as to allow of the development of irrigation from the Deobund Branch before another and it may be final revision of the assessment shall be undertaken. The three classes of estates formed in this pergunnah, with the area, assessment and the incidence of land revenue on each, are shown in the following Statement :—

Numbers of estates.	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigated.	Dry.	Assessment.	Rate per acre of total area.			Rate per acre of assessable area.	Rate per acre of cultivated area.
								Ra.	Ra. Aa. P.	Ra. Aa. P.		
Six estates recommended for Permanent Settlement ...	12	3,450	2,558	892	10,360	2 4 11	2 10 10	2 15 7	3	7	1 14 3	1 11 3
Fifty-four estates eligible under the 80 per cent. rule ...	7	31,051	14,084	16,967	58,771	1 8 0	1 11 7	1 14 3				
Sixteen estates with less than 80 per cent. of the assessable area cultivated ...	19	7,846	3,417	5,429	18,360	1 0 5	1 2 3	1 11 3				
Total ...	38	42,347	19,059	23,288	82,391	1 7 3	1 10 7	1 15 2	...	...	...	...
Including māsfee village ...	14	309	163	146	700	...	...	...	
Total (assessed) ...	56,054	49,153	7,114	42,038	18,896	23,143	81,691	...	...	...	...	...

8. *Pergunnah Charthawal.*—As in the case of Bagra, it is necessary to consider separately the two entirely distinct circles into which the Pergunnah of Charthawal is divided by the River Hindun.

Cis-Hindun Tract.—Former and present Settlements.—Permanent Settlement not recommended.—The portion east of the river contains 42 estates, the areas and incidence of assessment in which at the former and recent Settlements were as follows :—

Settlement.	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigated.	Dry.	Assessment.	Rate per acre of total area.	Rate per acre of assessable area.	Rate per acre of cultivated area.
							Rs.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Former Settlement,	33,101	31,689	4,590	27,099	...	...	44,002	1 2 6	1 6 3	1 10 0
Present Settlement,	33,867	33,922	4,738	29,184	7,510	21,674	39,883	1 0 5	1 2 10	1 5 10
Difference ...	+766	+2,233	+148	+2,085	...	...	...	-0 1 1	-0 3 5	-0 4 2

In this as in so many other pergunnahs in the district, the area under irrigation at last Settlement cannot now be ascertained, but there can be little doubt that this tract has made considerable progress; and that the present assessment is most moderate. The great want of the pergunnah is water, and that is now at last likely to be soon supplied from the Deobund Branch, which, when completed, will entirely change the circumstances of this tract. There is at present no estate of the 36 eligible under the 80 per cent. rule in which a moderate supply of canal water will not increase the assets assumed at Settlement by more than 20 per cent., and I therefore recommend that the present assessment be sanctioned as a temporary one, and that Permanent Settlement be delayed until canal irrigation shall be developed and the Settlement shall be again revised.

9. *Portion west of Hindun.—Former and present Settlements.*—To the west of the River Hindun lies the more fertile portion of the pergunnah, containing 17 estates, of which 12 are watered by the Eastern Jumna Canal. The areas and the incidence of the assessment in this tract at the recent and former Settlements are as follows :—

Settlement.	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigated.	Dry.	Assessment.	Rate per acre of total area.	Rate per acre of assessable area.	Rate per acre of cultivated area.
							Rs.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Former Settlement...	19,826	16,609	4,267	12,342	...	...	20,655	1 0 3	1 3 11	1 10 9
Present Settlement...	20,182	17,927	2,760	15,167	7,664	7,503	21,753	1 1 3	1 3 5	1 6 11
Difference...	+356	+1,318	-1,507	+2,825	...	...	+1,098	+0 0 7	-0 0 6	-0 3 10

Mr. Colvin, who settled this pergunnah, was of opinion that Mr. Thornton had assessed this tract "in anticipation of the rajbuha which was afterwards run out." But this view is not sufficiently confirmed; for the rajbuha was not opened until eight years after Mr. Thornton's Settlement, and the estates in which a high jumma was fixed are without exception well supplied with wells; while others close to the line of the rajbuha, but without wells, were assessed at very low rates. Unfortunately the area recorded as irrigated at last Settlement has not been ascertained, but there is

prima facie ground to expect a considerable increase to the assessment of a tract in which the area under cultivation had risen over 20 per cent., and in which a rajbaha irrigating nearly 5,000 acres had been constructed since the previous Settlement.

10. *Adequacy of present Settlement considered.*—Although, however, there can be no accurate comparison of the irrigated areas of the present and former Settlements, it is possible to compare the rates assumed by Mr. Thornton with those of the present Settlement. Mr. Thornton's rent-rates for wet and dry rosli, which comprise nearly the whole of the land in this tract, were Rs. 4-7-0 and Rs. 2-7-1½ respectively. Those given by Mr. Colvin's assessment are about Rs. 3-12-0 wet and Rs. 1-14-0 dry. That these rates (equivalent to annas 10 and annas 5 per kutchha beegah) are extremely low, is shown by the rates given in Appendix II.; while those found in adjoining pergunnahs to the south and west confirm the conclusion to which a comparison of the Settlement rates points, that those assumed at the recent Settlement are needlessly low, and that the present assessment does not represent the half-asset value of this prosperous and greatly improved tract. A sudden enhancement was at the time of Settlement undesirable; for the once turbulent Rajpoots had hitherto been leniently dealt with; but there seems to be no reason why the present light assessment should be made permanent.

11. *Permanent Settlement not recommended.*—I am therefore unable to recommend any estate in this tract for Permanent Settlement, for even the most highly assessed of all—Biralsi—has been settled at a sum very considerably below half assets. Indeed, the best estates in this circle are very little below those of the pergunnahs to the south, and it is found that when the land is let to others than the relations of the owners, rents rise nearly as high in Chauthawal as they do in Shikarpore, Kandhlah and Boorhanah.

The estates in this tract eligible under the 80 per cent. rule are as follows:—

Names of estates.	Total area in acres.	Total assessable area.	Culturable waste.	Cultivated area.	Irrigable.	Dry.	Assessment.	Rate per acre of assessable area.	Rate per acre of cultivated area.
							Ra.	R. As. P.	R. As. P.
1. Arnsech ...	506	465	74	391	70	321	300	0 10 4	0 12 3½
2. Badh ...	442	396	27	369	255	114	580	1 7 5	1 9 2
3. Baluahkheri ...	1,291	1,203	52	1,151	792	359	1,550	1 4 8	1 5 8
4. Biralsi ...	785	728	116	612	604	8	1,600	2 3 2	2 9 10
5. Budahkherah ...	880	750	119	631	143	488	1,000	1 5 4	1 9 4½
6. Bhambelah ...	1,194	1,144	193	951	360	591	800	0 11 4	0 13 5½
7. Pipalsan ...	2,050	1,827	352	1,475	485	990	1,600	0 14 0	1 1 4
8. Pilkhani ...	366	323	24	299	268	31	530	1 10 3	1 12 4
9. Tandah ...	427	367	19	348	283	65	660	1 12 9	1 14 4
10. Chimao ...	799	694	116	578	179	399	800	1 2 5½	1 6 2
11. Dudhli ...	1,743	1,533	126	1,407	898	509	2,200	1 7 0	1 9 0
12. Raoni ...	1,169	1,063	158	905	531	374	1,650	1 8 10	1 13 2
13. Alamgirpore ...	503	473	49	424	209	215	525	1 1 9	1 3 9
14. Alipurah ...	427	390	39	351	219	132	510	1 4 11	1 7 0
15. Qiamapore ...	683	606	60	546	80	466	600	0 15 10	1 1 7
16. Kanarheri ...	670	617	62	555	424	131	1,060	1 11 6	1 14 7
17. Guneajudi ...	647	598	52	546	268	278	881	1 7 7	1 9 10
18. Giyanah Muzrah ...	759	652	28	624	536	88	950	1 7 4	1 8 4
19. Harnakee ...	624	578	74	504	246	258	850	1 7 6	1 11 0
Total ...	15,965	14,407	1,740	12,667	6,850	5,817	18,646	1 4 8½	1 7 6½

12. The remaining upland pergunnahs of the Huzoor Tehseel Poor Chapar and Moozuffernugger having been already disposed of, and the Khadir Pergunnah of

Gordhanpore having previously been pronounced ineligible for Permanent Settlement, there are, therefore, if my conclusions be correct, only six estates in this tehsel, situated in Pergunnah Bagra, which are in every way suitable for Permanent Settlement. That more are not recommended is due in some measure to insufficiency of assessment, but in far the greater number of instances to the great change which will be effected by the opening of the long projected Deobund Branch, which will enormously increase the productiveness of a tract which with good soil, owned and cultivated for the most part by industrious brotherhoods, only wants more plentiful means of irrigation to enable it to rival the prosperous condition of the lands lying to the east and west of the Kalee and Hindun Doab.

The 9th February, 1870.

A. CADELL,
Settlement Officer.

APPENDIX I.

List of Estates in Pergunnah Bagra.

Sixty estates with 80 per cent. of the assessable area under cultivation, and eligible for Permanent Settlement.	Six Estates recommended for Permanent Settlement.	<ol style="list-style-type: none"> 1. Jasoi. 2. Salihkhereeh. 3. Alipurah. 	<ol style="list-style-type: none"> 4. Lalukheree. 5. Mahomadpur Mandan. 6. Nawadah.
Fifty-four estates, the exclusion of which from Permanent Settlement is recommended.		<ol style="list-style-type: none"> 1. Atali. 2. Bazeedpoor. 3. Barwalah. 4. Bagrah, Pati Aawan. 5. Ditto Turkman. 6. Ditto Hardiyal. 7. Ditto Chak Maafce. 8. Ditto Seetal, Bahadar. 9. Ditto Moradpurah. 10. Boodeenah Khoord. 11. Ditto Kalan. 12. Bhoapur. 13. Pipalherah. 14. Poennah. 15. Taolee. 16. Jagahereeh. 17. Jalalpur. 18. Charaolee. 19. Chataila. 20. Haidarnagar. 21. Durganpur. 22. Dhansen. 23. Dhaolree, Pati Dihkanah. 24. Dhandaolee. 25. Sanjuk. 26. Sikandarpur. 27. Sohnjee. 	<ol style="list-style-type: none"> 28. Saidpurah. 29. Shamushpur. 30. Zafarpur, Pati Bakhtawar Singh. 31. Ditto, Shamsher Khan. 32. Alipurah Khoord. 33. Qazekherah. 34. Kanaonee. 35. Kabeerpur. 36. Karwarah. 37. Kifayatpoor. 38. Khataolah. 39. Kharanja. 40. Kheree Doodadharee. 41. Labordah. 42. Maksoodpoor, Pati Brahmanan. 43. Ditto, Jatan. 44. Mokandpur. 45. Mandee. 46. Nirmanah. 47. Nirmanee. 48. Narotampur. 49. Nuglah Kithourah. 50. Harsaolee, Pati Anwar. 51. Ditto, Babru. 52. Ditto, Bahadar. 53. Ditto, Khodadia. 54. Ditto, Hardyal.
Sixteen estates with less than 80 per cent. of the assessable area under cultivation, and ineligible for Permanent Settlement.		<ol style="list-style-type: none"> 1. Ameernuggur, Pati Bakhtawar Singh. 2. Ditto, Shamsher Khan. 3. Titawee. 4. Dhaolree, Pati Hajee Khan. 5. Shahpur. 6. Tahurpur. 7. Kamrudinnagar. 	<ol style="list-style-type: none"> 8. Kootbee. 9. Goojarheree. 10. Ladwah. 11. Lakhan. 12. Naseerpur. 13. Noonakherah. 14. Harsaolee, Pati Oodhu. 15. Ditto, Pahal, rent-free. 16. Dhaolra.

List of Estates in Pergunnah Charthawal.

<p>Fifty-five estates with 80 per cent. of the assessable area under cultivation, and eligible but not recommended for Permanent Settlement.</p>	1. Arnaech.	29. Dadheroo Khoord.
	2. Akhlour.	30. Ditto Kalan.
	3. Badh.	31. Doodhlee.
	4. Bannagar.	32. Dehchund.
	5. Badhai Khoord.	33. Deedaheree.
	6. Ditto Kalan.	34. Bohnee Hurjeepur.
	7. Biralsee.	35. Saidpura Kalan.
	8. Barkallee Salempur.	36. Said Nugla.
	9. Baluah Kheree.	37. Alamgirpur.
	10. Boodha Kherah.	38. Useespur.
	11. Baheri Mirzapur.	39. Uleeppora.
	12. Bhambelah.	40. Qampur.
	13. Begumpur.	41. Kanarheree.
	14. Pepalsan.	42. Kuchowlee.
	15. Pilkhani.	43. Kussonlee.
	16. Paotee.	44. Kallurpur.
	17. Tandah.	45. Koolehree.
	18. Jat Nuglah.	46. Kotesra.
	19. Charthawal Pati, Bansi.	47. Gunesajuddi.
	20. Ditto, Chakdanda.	48. Ghesookherah.
	21. Ditto, Rajbibe.	49. Giyanah Masra.
	22. Ditto, Chowdhrain.	50. Loharee.
	23. Ditto, Ratta.	51. Mohibaleepur.
	24. Ditto, Ulmoo.	52. Mahmudpur Lakarsunda.
	25. Ditto, Moorda.	53. Nirdhana.
	26. Chowkra.	54. Harnakee.
	27. Chimaoo.	55. Hybatpur.
	28. Khoosropur.	
<p>Eleven estates with less than 80 per cent. of the assessable area under cultivation, and ineligible for Permanent Settlement.</p>	1. Akbargurh.	7. Kallana.
	2. Biralsa.	8. Muthra.
	3. Rassulpur.	9. Munganpur.
	4. Sekandarpeor.	10. Niamoo.
	5. Soongalpur.	11. Naglah Raceen.
	6. Kassara.	

APPENDIX II.

Rent-rates in Pergunnah Bagra per Kutcha Beegah = one-sixth of an Acre.

Number.	Name of Village.	Rent-rates per kutcha beegah fixed at Settlement.			Rent rates fixed by private agreement at and since Settlement.				Rent-rates fixed in Court.			Remarks regarding rent-rates fixed by private agreement and in Court.
		Wet.	Dry.	Bhoor.	All round.	Wet.	Dry.	Bhoor.	Wet.	Dry.	Bhoor.	
1	Atali, ...	...	...	...	...	0 14 0	0 9 0	...	...	...	...	354 acres. Among members of the brotherhood.
2	Pipalherah, ...	...	...	...	...	0 9 0	0 6 0	...	...	...	...	267 " Among members of the brotherhood.
3	Budhinah Kalan, ...	...	...	...	...	0 13 0	0 9 0	...	...	...	...	366 " Among members of the brotherhood.
4	Jasol, ...	0 14 6 0 13 6 0 12 6	7 0 0 0 6 0 0 6 0	0 4 0	...	0 13 0	0 8 0	0 4 0	...	...	...	769 " " " "
5	Chatela, ...	...	...	...	...	...	...	...	...	...	...	No money rents.
6	Chirsoli, ...	...	...	...	...	0 14 0	0 10 0	...	...	...	...	142 acres.
7	Dhaolri, Pati Hajee Khan, ...	...	...	...	...	...	...	...	...	...	...	No Money rents.
8	Dhaolri, Pati Dikhanah, ...	...	...	...	...	...	...	...	...	...	...	Ditto.
9	Sohnjui, ...	...	...	...	...	0 14 0	0 9 0	...	...	...	...	341 acres.
10	Sallkheri, ...	0 14 0	...	...	...	1 1 4	...	...	...	...	...	114 acres by private agreement, for 84 acres at Settlement.
11	Tahirpur, ...	...	...	...	...	...	...	...	...	...	...	No money rents.
12	Alipurah Kalan, ...	...	...	...	...	1 1 4	...	...	...	...	...	141 acres.
13	Kumrudinnagar, ...	...	...	...	...	0 12 0	0 8 0	...	...	...	...	217 acres. The wet land is let to favoured cultivators of the zemindars' caste.
14	Gujarheri, ...	...	...	...	...	1 0 0	0 8 0	0 4 0	...	...	...	65 acres. Lower rates for land on the slope.
15	Lalukheri, ...	...	...	...	...	1 0 0	0 8 0	...	...	...	...	202 " " "
16	Labordah, ...	...	...	...	...	0 8 0	...	...	...	...	...	18 " Among the proprietors themselves.
17	Mahomedpur Mandan, ...	...	...	...	...	1 5 8	...	...	...	...	...	88 " " "
18	Naglah Pctorah, ...	...	...	...	0 8 0	...	...	...	...	...	...	36 " Levied from proprietors alone.
19	Navadah, ...	...	...	...	...	0 1 6	0 10 0	...	...	...	...	160 " " "

APPENDIX II.—(concluded.)

Rent-rates in Pergunnah Charthawal per Kutcha Beegah = one-sixth of an Acre.

Number.	Name of Village.	Rent-rates per kutcha beegah fixed at Settlement.			Rent-rates fixed by private agreement as and since Settlement.				Rent-rates fixed in Court.		Remarks regarding rent-rates fixed by private agreement and in Court.
		Wet.	Dry.	Bhoor.	All round.	Wet.	Dry.	Bhoor.	Wet.	Dry.	
1	Arnaech,	...	...	...	...	...	...	...	...	...	No money rents.
2	Akbarghurh,	...	...	...	...	...	...	...	...	...	Ditto.
3	Barh,	...	...	...	...	1 0 0	0 10 0	...	...	...	212 acres.
4	Biralsak,	...	...	...	0 7 0	...	...	...	...	0 7 0	60 "
5	Biralsi,	...	...	...	...	0 12 0	...	...	1 4 0	...	8 acres In commutation—137 acres among Rajpoots themselves.
6	Baluah Kheri, ...	...	...	...	...	0 14 0	0 8 0	...	...	...	488 acres.
7	Budha Kherah, ...	...	0 6 0	...	...	...	...	...	...	...	45 "
8	Bhambelah,	...	...	...	...	...	...	...	...	...	No money rents.
9	Pipalsan,	...	...	...	...	...	...	0 6 0	...	...	132 acres. Rate paid by pahis.
10	Pikhan,	...	0 5 6	...	...	0 10 0	...	...	...	...	101 " Among the Rajpoot owners.
11	Tandah,	...	...	...	...	0 10 0	...	...	...	...	30 " Among the owners.
12	Chimao,	...	...	...	...	...	0 7 0	...	...	...	239 "
13	Dudhli,	...	...	...	...	1 1 8	0 10 4	0 5 11	...	...	288 "
14	Raoni,	...	...	...	...	0 13 4	...	...	...	...	No money rents.
15	Sikundarpur, ...	...	...	...	...	0 10 0	0 7 6	...	...	...	26 acres. In commutation.
16	Alangirpur,	...	...	...	...	0 6 0	...	...	...	...	186 " Among Rajpoots themselves.
17	Alipurah,	...	...	...	...	...	...	...	...	...	No money rents.
18	Kayampur,	...	...	...	...	0 12 0	0 6 6	...	...	...	202 acres.
19	Kanarheri,	...	...	...	...	1 4 0	...	...	...	...	30 "
20	Gunesjudi,	...	...	...	...	...	...	...	...	...	No-money rents.
21	Gyanah Mazrah,	...	...	...	...	0 11 3	0 8 0	...	...	...	111 acres.
22	Mangaupur,	...	...	...	...	0 12 0	0 6 0	...	...	...	246 " Among Rajpoot owners.
23	Nianu,	...	...	...	...	...	...	...	0 14 0	...	56 " In commutation.
24	Harnaki,	...	...	...	...	1 0 0	0 9 0	...	...	...	37 "

Statement shewing the Tenures on which the Mahals of Zillah Moosuffernuggur are held.

Pargunnah.	Zemindaree.	Putteedaree.	Bhyachara.	Total.
	1. Babree Mehal, Baluk Ram. 2. Sikka. 3. Senta Puttee, Basa Khan. 4. Shumshpore.	1. Babree Mehal Newab. 2. Jumalpoore Nuglee. 3. Senta Puttee, Rajpoot. 4. Ditto. Gomanee. 5. Kuroree.	1. Adumpore. 2. Budheo. 3. Burla Jat. 4. Bulwa Puttee Musulmanan. 5. Ditto, Ditto, Hindwan. 6. Bumnolee. 7. Bunut Puttee, Rumzan Ali. 8. Ditto, Sawae Singh. 9. Ditto, Seelaput. 10. Ditto, Mahr Singh. 11. Bunttee-khera, Jatan. 12. Ditto, Runguran. 13. Bunhera. 14. Bootraree. 15. Bootrara, Afghanan. 16. Ditto, Jatan. 17. Bhajoo. 18. Bhaoree. 19. Bhenswal. 20. Bheeka Muzra. 21. Bheekes Deh. 22. Bheekes Kadana. 23. Tajpore Sumbhalka. 24. Titolee. 25. Julalpore. 26. Jundheree. 27. Jhal Puttee Gulhwala. 28. Jhal Puttee, Khrub. 29. Chuk Khanpoor. 30. Chuk Kasimpore. 31. Chonsa. 32. Rhanpore. 33. Khanpore Tulba Muzra. 34. Dhunena. 35. Seekundra. 36. Sonta. 37. Sulawur. 38. Shamlee Puttee Bhugwan Singh. 39. ditto, Jowahur Singh. 40. ditto, Ghasee Ram. 41. ditto, Muhuidarpoora. 42. Shekhopora. 43. Futehpore. 44. Kasimpore. 45. Kabrote. 46. Kuroda. 47. Kuseerwah Khoord. 48. ditto, Kulan. 49. Kunjurheree. 50. Kunoonkhera. 51. Koodana. 52. Koormalee. 53. Kheree Buragee. 54. Kheree Puttee. 55. Kheree Kurmeon. 56. Kyree. 57. Goorhenee. 58. Gurh Shaishtpore. 59. Gohurpore. 60. Gogurpore. 61. Lank. 62. Leloun. 63. Muhdoopore Afghanan. 64. ditto, Jatan. 65. Mahrumpore. 66. Mundet. 67. Muhabatpore. 68. Niamutoollapore.	
Total,	4	5	68	77

S. N. MARTIN,
Collector.

Statement showing the effects of alienation by sales in execution of decrees of Court, or by private Transfer, during the currency of the past settlement in the Tehsil Shamlee, Pergunnah Shamlee.

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.
Name of Pergunnah.	Number of Villages.	Area in Acres.	Jumma.	PRIVATE TRANSFERS.				TRANSFERS BY ORDER OF COURT.				TOTAL.				EXEMPT FROM TRANSFERS.			Remarks.			
				Whole Villages.	Portions.	Acres.	Jumma.	Value.	Whole Villages.	Portions.	Acres.	Jumma.	Value.	Whole Villages.	Portions.	Acres.						
Bhamlee.	77	68,450	1,30,970 3 0	...	949	6,786	15,698 14 0	1,75,978 4 6	...	180	3,531	...	...	...	...	...	...	...	...	181	51,944	3,189 acres confiscated, 4½ on account of rebellion. The transfers in this pergunnah amount to 16 per cent. of area; the land is mostly held on the "bhuyachara" tenure, each village containing vast numbers of shareholders, as population increases, these people must mortgage and sell to each other; they cannot go on long clinging to the soil as proprietors, they will gradually become cultivators, and capitalists will. I hope, step into their places. The transfers then may be thus closed. Private transfer, 10½ per cent. By order of Court, 5½ per cent. Confiscated for rebellion, 4½ per cent. Exempt, 79½ per cent.
		100	Kistbandee 1268 P. S.			101					51				51,083	acres.						

S. N. MARTIN,
Collector.

Supplement to the Statement showing the effects of alienation by sales in execution of decrees of Court, or by private transfer, during the currency of the Settlement in the Tehsildar of Mozuffernuggur.

Caste of Transferrer.	PRIVATE TRANSFERS.		Caste of Transferee.	PRIVATE TRANSFER.		BY ORDER OF COURT.		Caste of Transferee.	BY ORDER OF COURT.		Whole Villages.	EXEMPT FROM TRANSFER.	
	Whole Villages.	Portions.		Whole Villages.	Portions.	Whole Villages.	Portions.		Whole Villages.	Portions.		Whole Villages.	Portions.
Jat,	...	747=4,388	...	...	36=302	...	144=2,433	...	...	9=126	...	...	...
					808=1,435					40=636			
					290=2,178					82=1,446			
					4=25					3=44			
					9=21					2=9			
					50=284					7=85			
					1=3					1=87			
					10=21								
					2=4								
					27=80								
					2=17								
					3=14								
					5=9								
Total of Jat,	...	747=4,388	Total,	...	747=4,388	...	144=2,433	Total,	...	144=2,433	...	3=684	3,190=38,808
Sheikhzada,	...	36=277	Jat,	...	8=40	...	...	...	...	...	...	...	286=1,090
			Fukeer,	...	2=11								
			Sheikhzada,	...	16=89								
			Syud,	...	8=67								
			Brahmin,	...	1=28								
			Mahajan,	...	6=47								
Total of Sheikhzada,	...	36=277	Total,	...	36=277	...	...	...	...	...	...	...	286=1,090
Brahmin,	...	44=343	Brahmin,	...	20=147	...	...	...	...	...	...	...	378=1,968
			Mahajan,	...	10=76								
			Sheikhzada,	...	4=48								
			Syud,	...	3=25								
			Jat,	...	2=9								
			Fukeer,	...	1=4								
			Khutree,	...	1=82								
			Kaeth,	...	3=7								
Total of Brahmins,	...	44=343	Total,	...	44=343	...	...	...	...	...	...	...	378=1,968

Supplement to the Statement showing the effects of alienation by sale in execution of decrees of Court, or by private transfer, during the currency of the Settlement in the Tehsils of Moosuffernuggur.

Caste of Transferrer.	PRIVATE TRANSFER.		Caste of Transferee.	PRIVATE TRANSFER.		BY ORDER OF COURT.		Caste of Transferee.	BY ORDER OF COURT.		EXEMPT FROM TRANSFER.	
	Whole Villages.	Portions.		Whole Villages.	Portions.	Whole Villages.	Portions.		Whole Villages.	Portions.	Whole Villages.	Portions.
Mahajan,	Acres. 48= 262	Brahmin, ... Jat, ... Mahajan, ... Pathan, ... Khattree, ... Fakir, ... Behora, ... Sheikhsada, ...	...	Acres. 4= 23 16= 90 16= 53 4= 4 4= 8 1= 1 2= 43 1= 43	...	...	Jat, ... Brahmin, ... Mahajan, ...	...	Acres. 1= 4 1= 2 3= 20	...	Acres. 260= 2,179
Total of Mahajan,	48= 262	Total, ...	...	48= 262	...	...	Total, ...	...	5= 26	...	260= 2,179
Goojur,	11= 52	Goojur, ... Brahmin, ...	...	9= 42 2= 10	...	...	Mahajan, ... Brahmin, ...	...	3= 30 6= 59	1= 177	364= 2,558
Total,	11= 52	Total, ...	...	11= 52	...	...	Total, ...	...	9= 89	1= 177	364= 2,558
Kaeth,	8= 17	Mahajan, ... Kaeth, ...	...	2= 3 6= 14	...	...	...	...	...	...	57= 93
Total,	8= 17	Total, ...	...	8= 17	...	...	...	...	...	...	57= 93
Syud,	1= 3	Syud, ...	...	1= 3	...	...	Moorul, ... Syud, ...	...	1= 5 1= 50	...	36= 89
Total,	1= 3	Total, ...	...	1= 3	...	...	Total, ...	...	2= 55	...	36= 89
Beloch,	14= 1,057	Moorul, ... Mahajan, ...	...	2= 103 13= 111	...	...	Mahajan, ...	...	3= 729	...	32= 131
Total,	14= 1,057	Total, ...	...	14= 1,057	...	...	Total, ...	...	3= 729	...	32= 131
Khattree, ... Rajpoot,	14= 77	Mahajan, ... Rajpoot, ... Syud, ... Chumar, ...	...	5= 18 7= 54 1= 4 1= 1	...	...	Mahajan, ... Rajpoot, ... Brahmin, ...	...	3= 18 2= 43 1= 16	...	14= 15 166= 1,315
Total,	14= 77	Total, ...	...	14= 77	...	...	Total, ...	...	5= 76	...	166= 1,315

L.R.

Pat han,	...	...	25= 141	Sheikhsada, Pathan, Mahajun,	...	...	1= 4 14= 92 10= 45	...	8= 93	Mahajun, Pathan,	...	...	6= 41 2= 52	...	298= 1,279.
Total,	...	...	25= 141	Total,	...	...	25= 141	...	8= 93	Total,	...	...	8= 93	...	398= 1,279
Enkeer,	...	...	7= 137	Kaeth, Yakeer, Mahajun,	...	...	1= 36 3= 66 5= 35	...	2= 24	Mahajun,	...	...	2= 24	...	32= 164
Total,	...	...	7= 137	Total,	...	...	7= 137	...	2= 24	Total,	...	...	2= 24	...	32= 164
Behora,	...	...	2= 5	Jat, Behora,	...	...	1= 2 1= 3	...	...	...	...	...	...	...	37= 62
Total,	...	...	2= 5	Total,	...	...	2= 5	...	...	...	...	...	...	...	37= 62
Moghul, Barber, Bheestee, Goldsmith, Carpenter, Saneer,	...	...	...	...	...	...	...	...	...	Mahajun,	...	...	...	...	1= 6 1= 4 9= 57 1= 2 3= 2 13= 281
Total,	...	...	2= 27	Behora, Saneer,	...	...	1= 17 1= 10	...	3= 4	Saneer,	...	...	1= 4	...	13= 281
Total,	...	...	2= 27	Total,	...	...	2= 27	...	3= 4	Total,	...	...	1= 4	...	13= 281
Kullal,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3= 1,002
GRAND TOTAL,	...	...	949=6,786	...	...	...	949=6,786	...	180=3,531	...	...	...	180=3,531	4=861	5,181=51,083=3,189 acres confiscated on account of rebellion.

A. COLVIN,
Settlement Officer.

S. N. MARTIN,
Collector.

Profits due to Canal.

1	2	3	4	5	6	7	8	9	10	11	12
Pergunnah.	Number of Villages Irrigated by Canal.	Area under Canal Irrigation.	Former aggregate Jumma of these villages.	New Jumma.	Increase.	Portion of Increase attributable exclusively to Influence of Canal.	Number of Villages Injurious affected by Canal.	Former Jumma.	New Jumma.	Portion of decrease attributable to the influence of the Canal.	Net gain to the Revenue of the Pergunnah from the Influence of Canals.
Shamlee,	48	Acres 14,607	Rs. a. p. 75,034 11 0	Rs. 77,370	Rs. a. p. 2,335 5 0	Rs. a. p. 5,107 0 0	...	...	...	...	Rs. a. p. 5,107 0 0

NOTE.—In estimating the profit due to the canal the amount of land irrigable from wells which have fallen into disuse since the canal was opened, has been deducted at the rate of 28 acres, for each well.—Upon the balance the difference between the wet and dry rates gives the profit,—after allowing for possible irrigation.

S. N. MARTIN,
Collector.

Statement of descriptions of soil, irrigated and unirrigated areas.

Name of Pergunnah.	TOTAL MALGOOZAREE AREA.										LAND NOT ASSESSABLE.	
	Total cultivated area in acres.										Waste.	Rent-free.
	Meesun.	Boalea.	Dakur.	Bhoor.	Total of irrigated land.		Total of unirrigated land.	Total of land recently thrown out of cultivation.	Total of culturable land.			
					By Canals, &c.	By Wells.						
Shamlee,	10,639	29,494	4,137	1,185	14,607	16,616	14,232	1,403	5,797	11,191	932	
	Irrigated.	Irrigated.	Irrigated.	Irrigated.								
	By Well. By Canal.	By Well. By Canal.	By Well. By Canal.	By Well. By Canal.								
	6,639 3,912	8,611 8,560	312 2,222	60 13		15,612						
	Otherwise.	Otherwise.	Otherwise.	Otherwise.		Otherwise.						
	143	353	506	2		1,004						
	Unirrigated.	Unirrigated.	Unirrigated.	Unirrigated.								
	55	11,970	1,097	1,110								

S. N. MARTIN,
Collector.

No. 2.—Comparative Statement of Cultivators with and without right of occupancy, and cultivating proprietors.

Name of Pergunnah.	Year.	Cultivators having right of occupancy.	Amount of land held by them in acres.	Average of cultivation in acres.	Tenants at will.	Amount of land cultivated by them in acres.	Average of cultivation.	Cultivating proprietors.	Land cultivated by them in acres.	Average of cultivation in acres.	Remarks.
Shamlee, ...	1840,	20	89	A. R. P. 4 1 82	5,475	13,773	A. R. P. 2 2 24	4,708	32,566	A. R. P. 7 0 20½	The villages to be deducted are those of which the former settlement Records are not forthcoming. They are inserted for uniformity, but are not available for comparison, and have not been included in the average.
		1,779	1,889	1 0 10	4,804	14,053	2 3 29½	4,612	29,513	6 1 27½	
Decrease, ...	...	...	...	3 1 22	704	...	...	175	4,449	0 2 33	
		1,746	1,788	...	...	238	0 1 27	...	...	...
Increase, ...	...	...	...	...	...	...	...	...	...	...
		

S. N. MARTIN,
Collector.

Statement of Villages paying rents in money and kind.

Name of Pergunnah.	Total number of Villages (Mehals).	Total Number of whole Villages in which rents in money have been fixed instead of that in kind.	Whole Villages in which money rents previously prevailed.	Villages in which rent in kind prevails.	Cultivators paying rent in kind.	Cultivators paying rent in money.	Remarks.
Shamlee, ...	77	...	7=446 Khatas or lots.	70 6 Villages in which rent in kind prevails. 64 Ditto in which both sorts of rent prevail.	3,833	2,505	This Pergunnah being mostly Bhyachars, or cultivating proprietary brotherhoods, both kinds of rent are few; Act XIV., 1863, has not been applied much.

S. N. MARTIN,
Collector.

No. 4.

Statement of Pukka Masonry wells used for irrigation.

Name of Pergunnah.	Masonry wells at the last Settlement.	Masonry wells at the present Settlement.	Wells that are out of repair.	Remarks.
Shamlee, ...	775	758	119	The number in the column 4, is in addition to that in column 3.

S. N. MARTIN,
Collector.

Statement showing the Tenures on which the Mehals of Zillah Mozuffurnuggur are held.

Pergunnah.	Zemindaree.	Putteedaree.	Bhyachara.	Total.
Kandla.	1. Asudpoor.	1. Badshapoor.	1. Umbeyta.	
	2. Aldee Puttee "Byj-nath."	2. Bural.	2. Islampoor, Ghusowlee.	
	3. Do. Puttee "Suda-sookh."	3. Phokurpoor.	3. Ailum Puttee Khoord.	
	4. Do. Puttee "Nanuk Chund."	4. Jogees Khera.	4. Ailum Puttee Kulan.	
	5. Phoogana Puttee "Dyanat."	5. Khizurpoor.	5. Bamnowlee.	
	6. Chuk Bhogulkhera.	6. Doondoo Khera.	6. Bussee.	
	7. Churhao.	7. Doorgunpoor.	7. Birum Khera Puttee "Ram-dut."	
	8. Rampoor Kherree Puttee "Bunseedhur."	8. Rajpoor, Chhajpoor.	8. Do. Puttee "Loda."	
	9. Sala Kherree.	9. Surnaolee.	9. Bunhera.	
	10. Esapoor Puttee Sheroo.	10. Soona.	10. Bharsee.	
		11. Fuzelpoor "Khaliaa."	11. Purasowlee.	
		12. Futtehpoor Kherree.	12. Pinjokra.	
		13. Kumroodeennuggur.	13. Phoogana Puttee Hookum.	
		14. Goojurpoor.	14. Do. Puttee Rajroop.	
		15. Loe.	15. Jussala.	
		16. Mullickpoor.	16. Chuk Dooma Khera.	
		17. Hurreea Khera.	17. Hussunpoor.	
			18. Khowaspoor.	
			19. Dangror.	
			20. Doongur.	
			21. Doodabar.	
			22. Russoolpoor.	
			23. Rampoor, Kherree Puttee "Gurh Goshaien."	
			24. Sherpoor.	
			25. Sulpa.	
			26. Shahpoor.	
			27. Tahurpoor, Bhubheesa.	
			28. Esapoor Puttee "Dhun Singh."	
			29. Fuzulpoor "Muzbitta."	
			30. Futtehpoor.	
			31. Khundraolee Puttee "Musulmanan."	
			32. Do. Puttee 'Hindooan.'	
			33. Kuraoda.	
			34. Kunyan.	
			35. Kewana.	
			36. Khera Mustan.	
			37. Kandla, 15 Biswas.	
			38. Kandla, 5 Biswas.	
			39. Do. Mehal "Ruheemoollah."	
			40. Do. Mehal "Mutfirrukat."	
			41. Khera Kurtan.	
			42. Gungeyroo Puttee Sadat.	
			43. Do. Puttee Mussulmanan.	
			44. Do. Puttee 'Goojuran.'	
			45. 'Lahereepoor.'	
			46. Lisadh.	
			47. Mutnaolee.	
			48. Meemlah.	
			49. Nala.	
			50. Hurmuzpoor.	
			51. Kasimpoor.	
Total,	10	17	51	78

S. N. MARTIN,
Collector.

A.

Statement showing the effects of Alienation by sale in Execution of decrees of Court, or private transfer, during the currency of the past Settlement in the Telaselee of Boorhana.

1.	2.	3.	4.	5.	6.	7.	8.	9.	10	11.	12.	13.	14.	15	16.	17.	18.	19.	20.	21.	22.	23.
Name of Pergunnah.	Number of Villages.	Area in acres.	Jumma.	Whole Villages.	Portions.	Acres.	Jumma.	Value.	Whole Villages.	Portions.	Acres.	Jumma.	Value.	Whole Villages.	Portions.	Acres.	Jumma.	Value.	Whole Villages.	Portions.	Acres.	Remarks.
Kandiah.	74	66,560	1,759 1 5 ...	848	8,782	13,380 12 11	1,63,285 3 11 ...	148	2,714	4,313 1 5	23,431 2 0 ...	996	11,496	17,693 14 4	1,86,716 5 11	10=	7,115=	53,876	3,333	50,543	81	The 848 trans- fers in column 6 are equal to 990 persons, and the 996 transfers in column 16, are equal to 1,192 persons The 7,115 in column 21 are shares : 1,188 acres or 2 shares out of 100 for the whole, con- fiscated on account of re- bellion.

S. N. MARTIN,
Collector.

A. COLVIN,
Settlement Officer.

B.
Supplement to the Statement showing the effects of alienation by sale in execution of Decrees of Court, or private transfer, during the currency of the past settlement in the Tehslee of Boorhana.

Pergunnah.	PRIVATE TRANSFERS.			Caste of Transferees	PRIVATE TRANSFERS. BY ORDER OF COURT.			Caste of Transferees.	BY ORDER OF COURT.			EXEMPT FROM TRANSFERS.		
	Caste of Transferrers.	Whole vil- lage.	Portions.		Whole vil- lage.	Portions.	Acres.		Whole vil- lage.	Portions.	Acres.	Whole vil- lage.	Portions.	Acres.
Sheikhzada,	...	...	Acres. 69= 411	...	...	31 = 231 32 = 111 1 = 50 3 = 7 2 = 12	Mahajun, Sheikhzada, Brahmin, Syud, Afghan,	...	2 = 2	...	...	Acres. 904= 2,456
	Total,	...	69= 411	Total,	...	69 = 411	Total,	...	2 = 2	...	...	904= 2,456
	Mahajun,	...	61=1,426	Afghan, Mahajun, Sheikhzada, Lime-maker,	...	1 = 1 58 =1,414 1 = 8 1 = 3	Mahajun, Sheikhzada,	...	3 = 4 1 = 1	2= 757	...	781= 3,155		
Goojur,	Total,	...	61=1,426	Total,	...	61 =1,426	Total,	...	4 = 5	...	...	781= 3,155
	...	...	103=1,430	Goojur, Mahajun, Sheikhzada, Afghan, Brahmin, Buhora, Kayeth, Kumboh, Jat, Syud,	...	27 = 181 60 = 829 4 = 40 1 = 41 3 = 51 2 = 14 1 = 138 1 = 2 2 = 24 2 = 110	Goojur, Mahajun, Sheikhzada, Afghan, Brahmin, Kayeth, Kumboh, Jat,	...	71= 83 33= 578 21= 99 1 = 19 6 = 188 3 = 12 21= 50 1 = 1	4=1,100	...	1,680=12,822
	Total,	...	103=1,430	Total,	...	103 =1,430	Total,	...	57 = 980	4=1,100	...	1,680=12,822		
Jat,	...	...	334=2,189	Mahajun, Jat, Brahmin, Gooshaeen, Buhora, Carpenter,	...	1221=1,249 1731= 697 31 = 190 1 = 28 5 = 23 1 = 2	Mahajun, Jat, Buhora,	...	26 = 372 4 = 103 3 = 18	2= 679	...	2,364=20,300
	Total,	...	334=2,189	Total,	...	334 =2,189	Total,	...	33 = 493	2= 679	...	2,364=20,300		
		

Afghan,	...	...	46= 553	Afghan, Jat, Bahora, Mooghul, Mahajun, Goldsmith, Brahmin, Sheikhzada,	...	...	5= 160 7= 55 4= 40 1= 36 23= 226 1= 3 2= 8 3= 25	...	10= 62	Jat, Mahajun, Tailor, Tugga, Sheikhzada,	...	1= 26 5= 17 2= 10 1= 5 1= 4	...	106= 675	
Total,	...	...	46= 553	Total,	...	...	46= 553	...	10= 62	Total,	...	10= 62	106= 675	...	
Rajpoot,	...	...	76=1,688	Rajpoot, Conchun, Mahajun, Goolahcen, Brahmin,	...	...	51= 987 1= 1 22= 522 1= 152 1= 21	...	23=1,030	Rajpoot, Mahajun,	...	19= 896 4= 204	503=5,866	...	
Total,	...	...	76=1,683	Total,	...	...	76=1,683	...	23=1,030	Total,	...	23=1,030	503=5,866	...	
Ruweh,	...	...	3= 11	Brahmin, Jat,	...	...	2= 6 1= 5	...	...	...	...	...	11= 188	...	
Total,	...	...	3= 11	Total,	...	...	3= 11	...	...	...	...	...	11= 188	...	
Brahmul,	...	...	19= 23	Jat, Mahajun, Brahmin,	...	...	3= 7 13= 13 3= 3	...	...	...	...	...	189= 656	...	
Total,	...	...	19= 23	Total,	...	...	19= 23	...	...	...	...	...	189= 656	...	
Karol,	...	...	9= 180	Rajpoot, Sheikhzada, Mahajun,	...	...	7= 147 1= 6 1= 27	...	4= 25	Karol,	...	4= 25	29=1,117	...	
Total,	...	...	9= 180	Total,	...	...	9= 180	...	4= 25	Total,	...	4= 25	29=1,117	...	
Balledmonger,	...	...	3= 5	Mahajun, Jat,	...	...	2= 3 1= 2	...	...	...	...	...	1= 2	...	
Total,	...	...	3= 5	Total,	...	...	3= 5	...	...	...	...	...	1= 2	...	
Jawgee,	...	...	34= 100	Mahajun, Sheikhzada, Mooghul,	...	...	31= 92 1= 3 2= 5	...	1= 2	Jowgee,	...	1= 2	47= 105	...	
Total,	...	...	34= 100	Total,	...	...	34= 100	...	1= 2	Total,	...	1= 2	47= 105	...	

Supplement to the Statement showing the effects of alienation by sale in execution of Decrees of Court, or private transfer during the currency of the past Settlement in the Tehseelee of Boorhana.—(concluded.)

Pergunnah.	PRIVATE TRANSFERS.				BY ORDER OF COURT.				EXEMPT FROM TRANSFERS.			
	Caste of Transferrers.	Whole Village.	Portions.	Acres.	Caste of Transferees.	Whole Village.	Portions.	Acres.	Whole Village.	Portions.	Acres.	Portions.
Gosasen, Syud,	1= 7 53= 587	...	Mahajun, Syud, Goojur, Mahajun, Brahmin,	...	...	...	...	...	...	...
Total,	53= 587	...	Total,	...	7= 106	...	...	...	...	...
Bow-maker, Tugra, Betul seller, Mooghul,	1= 2 1= 3 1= 2 30= 157	...	Mahajun, Mahajun, Sheikhzade, Mooghul, Mahajun, Syud,	...	...	...	...	...	...	...
Total,	30= 157	...	Total,	...	6= 8	...	...	...	...	...
Conchun, Kabar Moosulman, Malee, Carpenter, Dyer, Barber, Goldsmith, Vegetable-seller, Mason, Water-carrier, Blacksmith, Potter, Chumar, Sweeper,	3= 13 1= 1 ... ... ... ... ... ... ... ... ... ... ... ...	...	Mahajun, Mahajun, Carpenter, Carpenter, Carpenter, Carpenter, Carpenter, Carpenter, Carpenter, Carpenter, Carpenter, Carpenter, Carpenter, Carpenter,	...	...	...	...	...	...	...
GRAND TOTAL,	848=8,782	...	Total,	...	148=2,714	...	10=3,333	...	...	...
												7,115=50,549 : 1,188 acres confiscated on account of rebellion.

A. COLVIN,
Settlement Officer.

S. N. MARTIN,
Collector.

Profits due to Canal.

1	2	3	4	5	6	7	8	9	10	11	12
	Number of vil- lages irrigated by Canal.	Area under Canal irri- gation.	Former aggregate Jumma of these villages.	New Jumma.	Increase.	Portion of increase at- tributable exclusively to influence of Canal.	Number of Villages injuriously effected by Canal.	Rs. a. p.	Rs. a. p.	Portion of decrease at- tributable to the influ- ence of the Canal.	Net gain to the revenue of the pergunnah from the influence of Canal.
Kandla.	55	25,855	Rs. a. p. 67,442 9 5	78,990	Rs. a. p. 11,547 6 7	Rs. a. p. 9,456 0 0	...	...	...	...	Rs. a. p. 9,456 0 0

S. N. MARTIN,
Collector.

No. 1.

Statement of descriptions of soil, irrigated and unirrigated areas, &c.

Name of Pergunnah.	TOTAL MALGOOZAREE AREA.										LAND NOT ASSES- ABLE.		Remarks.
	Total Cultivated area in acres.										Total of land re- cently thrown out of cultiva- tion.	Total of culturable land.	
	Meesun.	Rooslee.	Dakur.	Bhoor.	Total of irrigated land.		Total of un- irrigated land.	Total of cultiva- tion.					
					By Canals.	By Wells.							
Kandla, ...	11,003	34,343	3,971	1,012	25,855	12,951 well 12,659 other means.	11,523	50,329	636	9,669	948		
Irrigated by { Wells, Canal, ...	4,820 6,152	7,692 16,555	122 3,148	25 ...	TOTAL MALGOOZAREE, =			56,356					
Unirrigated, ...	11 20	68 10,028	212 489	1 986	115	704 well 701 other means.	74	893	71	192		23	
For two masfee villages, ...	230	643	19	1									
Irrigated by { Wells, Canal, ...	187	497	17	...									
Unirrigated, ...	40 3	75 ...	...	...							
Other means, ...	...	71	2	1	TOTAL OF PERGUNNAH, =			68,152				

S. N. MARTIN,
Collector.

No. 2.

Comparative Statement of Cultivators with and without right of occupancy, and of cultivating proprietors.

Name of Pergunnah.	Year.	Cultivators having right of occupancy.	Amount of land held by them in acres.	Average of cultivation in acres.	Tenants at will.	Amount of land cultivated by them in acres.	Average of cultivation in acres.	Cultivating proprietors.	Land cultivated by them in acres.	Average of cultivation in acres.	Remarks.
Kandla, ...	1840	6	29	A. R. P. 4 3 13½	4,440	17,157	A. R. P. 3 3 18½	2,362	24,782	A. R. P. 10 1 39	The villages (5) to be deducted are those of which the former settlement records are not forthcoming. They are inserted for uniformity, but are not available for comparison, and have not been included in the average.
Decrease, ... Increase, ...	1860	2,358 Deduct. Balance. 5 villages. 161 2,197	5,289 Deduct. Balance. 5 villages. 236 5,063	2 1 8½ 2 2 4½ ...	4,639 Deduct. Balance. 5 villages. 120 4,519	17,547 Deduct. Balance. 5 villages. 263 17,284	3 3 12 0 0 6½ ...	3,486 Deduct. Balance. 5 villages. 464 3,032	27,493 Deduct. Balance. 5 villages. 3,745 23,748	7 3 13 2 2 26 ...	The fewness of hereditary tenants at the last settlement is ascribed to the fact that to prove the title to hereditary occupancy, a long period of possession was required; in the present settlement 12 years has been considered sufficient.

S. N. MARTIN,
Collector.

No. 3.

Statement of Villages paying rents in money and kind.

Name of Pergunnah.	Total number of Mehala.	Total number of whole villages in which rents in money have been fixed instead of those in kind.	Whole Villages in which money rents previously prevailed.	Villages in which rent in kind prevails.	Cultivators paying rent in kind.	Cultivators paying rent in money.	Remarks.
Kandla, ...	Khalisa. 76	...	21	54— 7 Villages in which only rent in kind prevails. 47 - Ditto in which both sorts of rent prevail.	3,531	2,296	Of 76 entered in column 2, 1 village (Bhogul Khara) is cultivated by the proprietors themselves.

S. N. MARTIN,

Collector.

(85)

No. 4.

Statement of Pukka Masonry wells used for irrigation.

Name of Pergunnah.	Masonry wells at the last Settlement.	Masonry wells at the present Settlement.	Wells that are out of repair.	Remarks.
Kandla, ...	327	355	43	The 43 wells entered in column 4, are in addition to those entered in column 3.

S. N. MARTIN,

Collector.

No. 5.

Statement showing the various kinds of crops grown at the time of measurement.

Name of Pergunnah.	Cultivated area in acres.	Книзем.																								Рублем.												
		Sugar-cane.	Cotton.	Churee.	Dhan.	Chohara Moonjee.	Jowar.	Oord.	Mote.	Bajra.	TIL.	Gowara.	Vegetable.	Mudwa.	Mukkie.	Indigo.	Torya.	Chesna.	Tobacco.	Moong.	Sun.	Kodo Shammah.	Kumgnue.	Loby.	Wheat.	Barley.	Gram.	Wheat and Barley.	Wheat and gram.	Musoor.	Turf.	Muttur or Peas.	Melon.	Gajur or Carrot.	Sirson or Mustard.	Ajwain.		
Kandla.	100	51	51	7	11	51	12	21	11	1	...	21	1	1	53	1	381	1	91	11	1	1
	50,329	2,824	2,812	3,543	826	2,646	6,033	1,232	694	96	2	1,100	102	403	2,859	4	25	10	76	64	7	88	419,081	233	4,607	728	160	68	8	86	13	15	1	2				

The lower line shows the percentage of each kind of crop.

S. N. MARTIN,
Collector.

Statement showing the Tenures on which the Mehals of Zillah Mozuffurnuggur are held.

Bergunnah.	Zemindaree.	Putteedaree.	Bhyachara.	Total.
Thannah Bhowan.	Ahmedpoor, ... Ambetha, ... Yakoobpoor, ... Bagh Bungla, ... Thannah Bhowan, Mehal Bagyan. Janeepoor, ... Jumalpoor, ... Jafirpoor, ... Khanpoor, ... Alleepoor, ... Ooamanpoor, ... Kadurpoor, ... Kazeepoor, ... Kootubgurh, ... Moolanpoor, ... Hurhur Futehpoor, ...	Ismaeelpoor, ... Bhindora, ... Pomar Khera, ... Raepoor, ... Sownjee Oomurpoor, ... Abdoolpoor, ... Oomurpoor, ... Kheree Gudaiee, ... Gurhee Abdoola Khan Puttee Puchdo. Ditto Puttee Soem, ... Gogwan, ... Gooranah, ... Niralee Oorf Kadur-gurh. Nagul, ... Heend, ... Yoonuspoor, ...	Ahateh Ghousegurh. Aorungabad. Boontah. Behasane Islumpoor. Bemebrsooda. Pultheyree. Teetarsee. Thannah Bhowan Put- tee Choudran. } Ditto, Puttee Kalroo, Ditto, Puttee Mussabee. Ditto, Mehal Moozbitta. Ditto, Puttee Nowgawan. Thirwah. Gurhee Abdoola Khan Puttee Huftoon. Ditto, Puttee Hustum. Insanah-oorf Musthgurh. Jellalabad. Chundeyna Mal. Dubheree. Deekharee Jemalpoor. Sontah Rusoolpoor. Firozpoor. Khyaree. Kyi Shikarpoor. Lada Muza. Loharee. Madulpoor. Manuckpoor. Munt Munttee. Niralsehoorf, Maroo- kheyra. } Nowjul Moujlee. Hurunwara. Yarpoor.	
Total, ...	15	16	33	64

S. N. MARTIN,
Collector.

A.

Statement showing the effects of alienation by sale in execution of decrees of Court, or private transfer during the currency of the past Settlement in the Tehsees of Shamlee.

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.
Name of Pergunnah.	Number of Villages.	Area in Acres.	Jumma.	Whole Village.	Portions.	Acres.	Jumma.	Value.	Whole Village.	Portions.	Acres.	Jumma.	Value.	Whole Village.	Portions.	Acres.	Jumma.	Value.	Whole Village.	Portions.	Acres.
				PRIVATE TRANSFERS.				TRANSFERS BY ORDER OF COURT.				TOTAL.				EXEMPT FROM TRANSFERS.					
				Whole Village.	Portions.	Acres.	Jumma.	Value.	Whole Village.	Portions.	Acres.	Jumma.	Value.	Whole Village.	Portions.	Acres.	Jumma.	Value.	Whole Village.	Portions.	Acres.
Thana Bhawan.	53	44,931	55,896	14	32=737	236=	6,299	14	6	4,015	Whole Village.	896	1	6	8,900	0	0	1,450	0	0	1,736=
	mafee.				Acres.	3,278	Whole Village.	Whole Village.	Whole Village.	Whole Village.	Whole Village.	Whole Village.	Whole Village.	Whole Village.	Whole Village.	Whole Village.	Whole Village.	Whole Village.	Whole Village.	Whole Village.	Whole Village.
	8						896	1	6	4,015	896	1	6	8,900	0	0	896	1	6	8,900	0
Thana Bhawan.	61						5,403	13	0	35,880	5	3	12,384	8	0	7,515	5	7	48,164	13	3
							5,403	13	0	35,880	5	3	12,384	8	0	7,515	5	7	48,164	13	3
							5,403	13	0	35,880	5	3	12,384	8	0	7,515	5	7	48,164	13	3

Remarks.—The 236 Transfers in Column 6 are equivalent to 303 parties, and the 60 Transfers in Column 11 to 97 parties. The 1,736 in Column 21 are parties. 7,586 Acres confiscated on account of rebellion.

S. N. MARTIN,
Collector.

B.
Statement showing the effects of alienation by sale in execution of Decrees of Court, or private transfers during the currency of the past Settlement in the Supplement to the Tehsed of Shamlee.

Pergunah.	PRIVATE TRANSFERS.			Caste of Transferees.	PRIVATE TRANSFERS.			Caste of Transferees.	BY ORDER OF COURT.			Caste of Transferees.	BY ORDER OF COURT.			EXEMPT FROM TRANSFERS.		
	Whole Vil- lage.	Portions.	Acres.		Whole Vil- lage.	Portions.	Acres.		Whole Vil- lage.	Portions.	Acres.		Whole Vil- lage.	Portions.	Acres.	Whole Vil- lage.	Portions.	Acres.
	Syud,	...	1=394	2= 45	...	...	1= 39	...	Dogur, Mahajun,	...	...	...	...	...	...	...	...	...
	Total,	...	1=394	2= 45	Total,	...	2= 45	...		...	...	...	...	...	...	...	...	...
	Ror,	...	...	7= 111	...	...	2= 9	...	Mahajun, Brahmin,	...	...	...	...	...	...	...	...	...
	Total,	...	...	7= 111	Total,	...	7= 111	...		...	...	...	...	...	...	...	...	...
	Jat,	...	...	24= 562	...	...	20= 530	...	Mahajun, Jat,	...	...	...	...	...	...	...	...	...
	Total,	...	...	24= 562	Total,	...	24= 562	...		...	...	...	...	...	...	...	...	...
	Rajpoot,	...	...	95=1,495	...	...	40= 665	...	Mahajun, Rajpoot,	...	...	...	...	...	...	...	...	...
	Total,	...	...	95=1,495	Total,	...	40= 665	...		...	...	...	...	...	...	...	...	...
	Mahajun,	...	...	10= 63	...	...	11= 105	...	Mahajun, Rajpoot,	...	...	...	...	...	...	...	...	...
	Total,	...	...	10= 63	Total,	...	1= 22	...		...	...	...	...	...	...	...	...	...
		...	...	...	...	...	1= 18	...		...	...	...	...	...	...	...	...	...
		...	...	95=1,495	...	...	95=1,495	...		...	...	...	...	...	...	...	...	...
		...	...	10= 63	...	...	6= 35	...	Mahajun, Rajpoot,	...	...	...	...	...	...	...	...	...
	Total,	...	...	10= 63	Total,	...	1= 24	...		...	...	...	...	...	...	...	...	...
		...	...	...	...	...	1= 1	...	Mahajun, Brahmin, Rajpoot,	...	...	...	...	...	...	...	...	...
		...	...	...	...	...	1= 2	...		...	...	...	...	...	...	...	...	...
	Total,	...	...	10= 63	Total,	...	10= 63	...		...	...	...	...	...	...	...	...	...
	Brahmin,	...	...	8= 115	...	...	3= 32	...		...	...	...	...	...	...	...	...	...
	Total,	...	...	8= 115	Total,	...	4= 49	...		...	...	...	...	...	...	...	...	...
		...	...	...	...	...	1= 34	...		...	...	...	...	...	...	...	...	...
		...	...	...	...	...	8= 115	...		...	...	...	...	...	...	...	...	...
		...	...	...	...	...	8= 115	...		...	...	...	...	...	...	...	...	...

Profits to Canal.

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
Pergunnah.	Number of Villages irrigated by Canal.	Area under Canal irrigation.	Former aggregate Juma of these Villages.	New Juma.	Increase.	Portion of increase attributable exclusively to influence of Canal.	Number of Villages injuriously affected by Canal.	Former Juma.	New Juma.	Portion of decrease attributable to the influence of the Canal.	Nett gain to the Revenue of the Pergunnah from the influence of the Canal.
Thana Bhowan.	38	9,598	43,853 2 3	43,905	...	9,101 0 0 Subsequently modified to Rs. 6,024	...	...	...	...	Rs. 9,101 0 0 6,024

Note.—There are 52 masonry wells out of work owing to the Canal ; allowing 22 acres as the annual amount of irrigation from each well, the deductions from the irrigated area will amount to 1,144 acres, according to the proportion of each kind of soil : upon the balance the difference between dry and wet rates gives the profits due to the Canal.

S. N. MARTIN, Collector.

Statement of descriptions of soil irrigated and unirrigated areas.

Pergunnah.	CULTIVATED AREA										LAND NOT ASSESSABLE		
	MALGOOZAREE AREA												
	Meesun.	Rouslee.	Dakur.	Bhoor.	Irrigation.		Unirrigated.	Recently abandoned.	Culturable.	Waste.	Rent Free.		
Pergunnah.	7,003 Irrigated by wells. 4,318 By other means.	16,423 Irrigated by wells. 4,595 By other means.	3,948 Irrigated by wells. 520 By other means.	318 Irrigated by wells. 35 By other means.	By Canal.	By wells.	Unirrigated.	6,619	5,127	9,243	6,389		
	101 By Canals.	249 By Canals.	265 By Canals.	17 By Canals.	9,598	10,100 By wells. 9,468 By other means.	7,994						
	2,490 Unirrigated.	4,931 Unirrigated.	2,108 Unirrigated.	69 Unirrigated.		632							
	94 Mafee Village, 3.	6,648	1,055	197									
Thana Bhowan.	271 Irrigated by wells. 181 By other means.	780 Irrigated by wells. 250 By other means.	543 Irrigated by wells. 49 By other means.	28 Irrigated by wells. 17 By other means.	683	583 By wells. 480 By other means.	376	158	415	326	...		
	19 By Canals.	30 By Canals.	54 By Canals.	11 By other means.									
	67 Unirrigated.	290 Unirrigated.	359 Unirrigated.										
	4	280	81										

S. N. MARTIN, Collector.

No. II.

Comparative Statement of cultivators with and without right of occupancy, and of cultivating proprietors.

Name of Pergunnah.	Year.	Cultivators having right of occupancy.	Amount of land held by them in Acres.	Average of Cultivation. Acres.	Tenant-at-Will.	Amount of land cultivated by them. Acres.	Average of cultivation. Acres.	Cultivating proprietors.	Land cultivated by them. Acres.	Average of Cultivation. Acres.
Thana Bhowan,	1,840	170	936	A. R. P. 5 2 1	2,453	11,330	A. R. P. 4 2 19	2,344	17,463	A. R. P. 7 3 5
	1,860	535	2,045	3 2 29	2,552	11,495	4 1 3½	1,322	14,152	10 1 31
Decrease,	...	Deduct balance 7 Villages.	Deduct balance. 7 Villages.		Deduct balance. 7 Villages.	Deduct balance. 7 Villages.		Deduct balance. 7 Villages.	Deduct balance. 7 Villages.	
	...	22=513	163=1,882	1 3 14	34=2,418	1,171=10,324		57=1,265	989=13,213	...
Increase,	...	343	946	...	36	1,006	0 1 15½	979	4,250	2 3 26
	

S. N. MARTIN, Collector.

Statement of Villages paying rents in money and in kind.

Name of Pergunnah.	Total Number of Villages (Mehal).	Total number of whole villages in which rent in money has been fixed instead of that in kind.	Whole villages in which money rent was previously prevailing.	Villages in which rent in kind prevails.	Cultivators in these villages paying rent in kind.	Cultivators in these villages paying rent in money.	Remarks.
Thana Bhowan,	61	2=16	1=11	56	2,565	495	The villages entered in Column 2, but excluded from Columns 3, 4, 5 are occupied entirely by cultivating proprietors.
	Khalsa.	Cultivators.	Cultivators.	16 Villages in which only rent in kind prevails.			
...	59	1 Bagh Bungla.	Yannushpore.	40 Villages in which both sorts of rent prevails.			•
	Resumed Maafee and Maafee 2.	2 Jemalpore.					

S. N. MARTIN, Collector.

Statement of Pukka Masonry wells used for irrigation.

Name of Pergunnah.	Masonry wells at the last Settlement.	Masonry wells at the present Settlement.	Wells that are out of repair.
Thana Bhowan,	697	567	165

S. N. MARTIN,
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No. 5.

Name of Pergunnah.	Cultivated Area in Acres.	KHURREE.																						RUBBER.										
		Sugar-cane.	Baree or Cotton.	Churree.	Dhan.	Chuhora Moonjee.	Jowar.	Orud.	Mot.	Bayrah.	Til.	Gowarah.	Vegetables.	Mundwa.	Makkee.	Indigo.	Tortya.	Tobacco.	Moong.	Sunee or Hemp.	Kodoon and Shamakh.	Kungnee.	Wheat.	Barley.	Gram.	Wheat and Barley.	Wheat and Gram.	Musoor.	Turah.	Kurur.	Cheenuh.	Mustard.	Makra or Peas.	Dhunees or Corlander.
Thana Bhowan.	37,381	1,344	1,037	2,442	506	2,151	886	1,388	445	234	3	169	276	488	1,009	154	418	21	3	6	50	22	13,180	403	589	21	34	57	17	1	4	8	14	1
	100	4½	4	9	2½	8	3	5	1½	1	...	½	1	1½	4	½	1½	...	...	...	...	...	48½	1½	2½	...	...	...	...	...	...	...	...

The lower line shows the percentage of each crop.

S. N. MARTIN,
Collector.

Statement showing the Tenures on which the Mehals of Zillah Mozuffernuggur are held.

Pergunnah.	Zemindaree.	Putteedaree.	Bhyachara.	Total.
Boorhana.	Jowlah. ...	Attalee, ... Ookaolee, ... Uteyrna Aleespoor, ... Bitada, ... Burkutta Moglan, ... Bowanah, ... Buhsana, ... Chundherree, ... Roypoor Uteyrna, ... Rookunpoor, ... Beyaolee Nugia, ... Surree, ... Sultanpoor, ... Shahpoor Busee, ... Kootubpoor, ... Kooralsee, ... Gurhmulpoor, ... Lohsana, ... Mundawolee, ... Mindkalee, ... Nusseerpoor, ... Nugwa, ...	Etawa. ... Burkutta Rowa. ... Buraoda. ... Bugeeana. ... Qasbeh Boorhana. ... Behloulpoor. ... Tanda Moosra. ... Todah. ... Hubeelpoor Seekree. ... Hosseinabad. ... Hosseinpoor. ... Khuzurpoor. ... Russoolpoor Dubhairee. ... Sutheyree. ... Shah Dubbur. ... Koorawa. ... Koorthul. ... Khurur. ... Khairee Ghunee. ... Munwara. ... Wailee. ...	
Total, ...	1	22	21	44

S. N. MARTIN, Collector.

Statement showing the amount of Transfers for Pergunnah Boorhana.

Name of Pergunnah.	Number of Villages.	Area in Acres.	Jumma.	PRIVATE TRANSFERS.							TRANSFERS BY ORDER OF COURT.							TOTAL.							EXEMPT FROM TRANSFERS.														
				Whole Villages.	Portions.	Acres.	Jumma.	Value.	Whole Villages.	Portions.	Acres.	Jumma.	Value.	Whole Villages.	Portions.	Acres.	Jumma.	Value.	Whole Villages.	Portions.	Acres.	Whole Villages.	Portions.	Acres.															
Boothnah.	43	49,698	68,900	3	6	...	343	3,839	7,398	2	6	54,889	14	6	...	76	1,338	3,036	14	10	17,347	9	0	...	418	5,677	10,435	1	4	72,137	7	6	4,678	3,318	36,007	40,685	3,336	Acres	confiscated for rebellion

Independent of the confiscated area, the transfers amount to nearly one-ninth of the whole area of the Pergunnah. This is not as much as I have observed in other Pergunnahs.

S. N. MARTIN,

Collector.

Ruwa, Moghul,	Total,	...	10= 115	Ruwa, Mahajun,	Total,	...	5= 29 5= 86	...	7= 134	Ruwa, Mahajun, Bohrab,	Total,	...	1= 12 5= 115 1= 7	1= 299	250= 1,929
Moghul,	Total,	...	10= 115	Rajpoot, Moghul, Mahajun,	Total,	...	10= 115	...	7= 134	Mahajun, Moghul,	Total,	...	7= 134	1= 299	250= 1,929
		...	5= 50			...	1= 16 3= 32 1= 2	...	4= 133			...	1= 5 3= 128	...	60= 654
	
Jat,	Total,	...	5= 50	Jat, Mahajun, Bohrab, Sheikh,	Total,	...	5= 50	...	4= 133	Jat, Mahajun, Bohrab,	Total,	...	4= 133	...	60= 654
		...	122= 800			...	53= 387 55= 350 3= 28 10= 34 1= 1	...	26= 384			...	3= 48 23= 323 1= 13	...	890= 9,079
	
Mahajun,	Total,	...	122= 800	Brahmin, Ruwa, Jat, Saneer, Afghan or Pathan,	Total,	...	122= 800	...	26= 384	Total,	...	...	26= 384	...	890= 9,079
		...	11= 293			...	1= 4 2= 71 4= 58 1= 33 3= 57	...	...			...	...	...	134= 475
	
Goojur,	Total,	...	11= 293	Brahmin, Goojur,	Total,	...	11= 293	...	...	Brahmin, Mahajun,	Total,	...	...	...	134= 475
		...	3= 31			...	1= 8 2= 23	...	4= 89			...	1= 20 3= 69	...	78= 1,451
	
Bhat,	Total,	...	3= 31	Bhat, Mahajun, Sheikh,	Total,	...	3= 31	...	4= 89	Mahajun,	Total,	...	4= 89	...	78= 1,451
		...	9= 90			...	3= 32 5= 54 1= 4	...	3= 27			...	3= 27	...	63= 485
	
Kumbob,	Total,	...	9= 90	Kumbob, Khutree, Mahajun,	Total,	...	9= 90	...	3= 27	Total,	...	...	3= 27	...	62= 485
		...	8= 172			...	1= 109 1= 16 1= 47	...	...			...	...	...	1= 51
	
Sheikh,	Total,	...	8= 172	Total,	...	...	3= 172	...	...	Sheikh,	Total,	...	...	...	1= 51
		...	4= 12			...	3= 11 1= 1	...	1= 7			...	1= 7	...	358= 1,376
	
Total,	Total,	...	4= 12	Total,	Total,	...	4= 12	...	1= 7	Total,	Total,	...	1= 7	...	358= 1,376

Supplement to the Statement showing the effects of alienation by sale in execution of decrees of Court, or by private transfer, during the currency of the Settlement in the Tehseel of Bodhanah.—(concluded.)

Pergunnah.	Caste of Transferrer.	PRIVATE TRANSFERS.			Caste of Transferee.	BY ORDER OF COURT.			Caste of Transferee.	BY ORDER OF COURT.			EXEMPT FROM TRANSFER.		
		Whole Vil- lage.	Portions.	Acres.		Whole Vil- lage.	Portions.	Acres.		Whole Vil- lage.	Portions.	Acres.	Whole Vil- lage.	Portions.	Acres.
BODHANAH.—(concluded.)	Kaeth,	...	1= 5	...	...	...	...	...	...	...	...	...	...	...	9= 4
	Brahmin,	...	1= 3	...	Kaeth,	...	...	...	...	...	...	...	...	...	69= 99
	Goojraatee,	...	...	...	Mahajun,	...	...	...	...	...	...	...	...	...	7= 5
	Carpenter,	...	...	...	...	...	...	...	...	...	...	...	...	...	7= 12
	Barber,	...	...	...	...	...	...	...	...	...	...	...	...	...	2= 1
	Kular,	...	...	...	...	...	...	...	...	...	...	...	...	...	1= 1
	Malee or Saneer,	...	...	...	...	...	...	...	...	...	...	...	...	...	7= 22
	Syud,	...	...	...	...	...	...	...	...	...	...	...	...	...	10= 18
	Mewatee,	...	...	...	...	...	...	...	...	...	...	...	...	...	1= 4
	Mujawur,	...	...	...	...	...	...	...	...	...	...	...	...	...	4= 10
	Breadmaker,	...	...	...	...	...	...	...	...	...	...	...	...	...	10= 6
	Teergur,	...	...	...	...	...	...	...	...	...	...	...	...	...	2= 2
	Nukkal,	...	...	...	...	...	...	...	...	...	...	...	...	...	3= 5
	Kunchun,	...	...	...	...	...	...	...	...	...	...	...	...	...	1= 15
	Fukeer,	...	...	...	...	...	...	...	...	...	...	...	...	...	3= 36
GRAND TOTAL, ...		...	342=3,839	...	Total, ...	...	...	...	...	...	...	...	6=4,678	...	3,218=36,007=3,336 acres confiscated for rebellion.

REMARKS.—The largest amount of transfers has been among the Rajpoots, next to them the Jats. The latter are a very numerous proprietary body in this pergunnah, altogether 537 shareholders of different estates have effected transfers.

S. N. MARTIN,
Collector.

Statement showing amount of profits in the Pergunnah Boorhana attributable to the Eastern Jumna Canal.

1	2	3	4	5	6	7	8	9	10	11	12
Pergunnah.	Number of Villages irrigated by Canal.	Area under Canal Irrigation.	Former aggregate of these villages.	New Jumna.	Increase.	Portion of increase attributable to influence of Canal.	Number of villages injured by Canal.	Former Jumna.	New Jumna.	Portion of decrease attributable to influence of the Canal.	Net gain to the Pergunnah from the influence of Canals.
Boorhana, ...	1	Acres, 200	Rs. 5,992	Rs. 5,986	...	Rs. 210	...	...	...	...	Rs. 210

S. N. MARTIN, Collector.

Statement of Descriptions of Soil, irrigated and unirrigated areas.

Name of Pergunnah.	TOTAL MALGOOZAREE AREA.										LAND NOT ASSESSABLE.	
	Total cultivated area in Acres.										Waste.	Rent-free.
	Meesun.	Roasee.	Dakur.	Bhoor.	Total of irrigated land.			Total of land recently thrown out of cultivation.	Total of cultivable land.			
					By Canals, &c.	By Wells.	Total of unirrigated land.					
Boorhana, ...	9,713 Irrigated. By Wells. By Canals, &c.	23,840 Irrigated. By Wells. By Canals, &c.	692 Irrigated.	1,067 Irrigated.	200 18,518	18,318	16,764	1,454	5,067	8,423	50	
	9,392 Unirrigated.	8,713 Unirrigated.	182 Unirrigated.	31 Unirrigated.			35,282					
	289	14,959	480	1,036								

Remarks.—'Rooslee' is the prevailing kind of soil. The irrigated and unirrigated areas are in the proportion of

S. N. MARTIN, Collector.

Comparative Statement of Cultivators with and without right of Occupancy, and of cultivating Proprietors, Pergunnah Boorkana.

Year.	Cultivators having right of occupancy.	Amount of land held by them in acres.	Average of cultivation in acres.	Tenants-at-will in acres.	Amount of land cultivated by them in acres.	Average of cultivation in acres.	Cultivating proprietors in acres.	Land cultivated by them in acres.	Average of cultivation in acres.	Remarks.
1840,	...	550	2,889	5 0 35	2,776	10,874	A. R. P. 3 3 27	2,269	17,943	A. R. P. 7 3 25
1862,	...	1,588	3,890	2 1 31	4,724	13,467	3 3 16	2,439	17,925	7 1 31
Decrease,	2 3 4	...	...	1 0 11	...	18	0 1 34
Increase,	...	1,038	1,021	...	1,948	2,598	...	170	...	

As might have been expected the numbers of cultivators of both kinds have increased while the average area of

in the case of the hereditary tenants ("mowroos"), the class most obnoxious to the zemindars. There has been a very steady battle between the zemindars and tenants as to the word hereditary. The former would like to have nothing but tenants at will, the latter contested their occupancies as if they were little zemindars. The mikasees for the last twelve years decided the day.

S. N. MARTIN,
Collector.

Statement of Villages paying rents in money and in kind.

Name of Pergunnah.	Total number of Villages.	Total number of whole Villages in which rent in money has been fixed instead of that in kind.	Whole Villages in which money rent previously prevailed.	Villages in which rent in kind prevails.	Cultivators paying rent in kind.	Cultivators paying rent in money.	Remarks.
Boorhana, ...	44	...	2	42 Villages, and 6,271 Cultivators. 4 Villages in which only rent in kind prevails and 624 Cultivators. 38 Villages in which both sorts of rent prevail and. 5,647 Cultivators, i.e.— 2,296 kind. 3,351 money.	2,920	3,351	

S. N. MARTIN, Collector.

No.

Statement of Pukka Masonry Wells used for Irrigation.

Name of Pergunnah.	Pukka wells at the last Settlement.	Masonry wells at the present Settlement.	Wells that are out of repairs.	Remarks.
Boorhana, ...	186	186	24	Increase of 24 since the last Settlement, most of the irrigation is carried on by kutchha wells which are not included in this return. These kutchha wells are easily dug in this Pergunnah and last a few years.

S. N. MARTIN, Collector.

Pergunnah Boorhana.

Pergunnah.	KHURREEF.																				RUBBER.												
	Sugar-cane.	Sugar-cane recently plant- ed and cut the follow- ing year.	Cotton.	Indian corn or Mukkee.	Orurd.	Churree.	Carrot.	Dhan (Rice).	Samuk.	Moongjee (Rice).	Jwar.	Bajra.	Mundwa.	Kunwara.	Mote.	Moong.	Urthur (Dal).	Kunagnee.	Total of Khurreef.	Wheat.	Barley.	Gram.	Fallow land.	Tobacco.	Vegetables.	Palee (i.e., melons).	Indigo.	Goyee.	Tortah.	Kurur.	Onion.	Mussoor.	Wheat and Gram.	Total of Rubbee.
35,282	1,805	46	1,280	1,236	828	6,782	76,575	71,26	4,906	219	54	678	3,090	99,36	46	21,853	7,170	522	1,034	4,391	18	40	70	1	35	27	59	27	25	10	13,429		
100	2½	...	2½	3½	3	19	4	14	4	14	4	14	8	2	2	61	21	1-14	2-14	10-10	1	1	1	1	1	1	1	1	1	1	1	1	39
																				Acres.													

Boorhana.

The chief crop in the Khurreef is Churree and in the Rubbee Wheat.

S. N. MARTIN,
Offg. Collector.

Statement showing the Tenures on which the Mehals of Moozufernuggur are held.

Pergunnah.	Zemindaree.	Putteedaree.	Bhyachara.	Total.
Shikarpore.	Huzzoor Nuggur. Shahpoor Zoonardae Chuk Sheepoor Alumpoor.	Alahyarpoor. Jonchoura. Buhramgurh <i>alias</i> Guffoor- gurh. Pulree. Pulra. Poor Balian. Poora. Jestpoor. Jewnab. Chandpoor. Khanpoor. Khoobanpoor. Dinkurpoor. Deollehra. Duttayun. Dhundaolee Afghanan. Shahjooddee. Sudder-ood-deennuggur. Sohunjee Mehal 8 Biswa. Kootba. Alumpoor. Kumalpoor. Kheree Soondian. Mundaolee. Morkohoka. Nizampoor. Hulolee.	Audumpoor. Alahyarpoor, Puttee Moobarikpoor Bussee. Bhoura Khoord. Busdhara. Buhadurpoor. Bhura Kulan. Papurholee. Duhul. Rusoolpoor Jatan. Saotoo. Sissoulee. Sularoo. Shikarpoor. Shoron Puttee Peer Bux. Ditto Puttee Hursuhay. Ditto Puttee Sheosing. Sheepoor. Sohunjee Mehal, 12 Biswa. Alawulpoor. Oomurpoor. Kakra. Kitaso. Kurondee. Kusserwa. Kulyanpoor. Gurhee Nowabad. Goelab. Moobarikpoor. Muhmudpoor Raising. Muhmudpoor Zoonardar. Moondhpoor.	
Total,	8	27	32	62

S. N. MARTIN,
Collector.

Statement showing the amount of transfers for Pergunnah Shikarpoor.

Name of Pergunnah.	Number of Villages.	Area in acres.	PRIVATE TRANSFERS.				TRANSFERS BY ORDER OF COURT.				TOTAL.				EXEMPT FROM TRANSFERS.			Remarks.	
			Whole Villages.	Portions.	Acres.	Jumma. Rs. a. p.	Whole Villages.	Portions.	Acres.	Jumma. Rs. a. p.	Value. Rs. a. p.	Whole Villages.	Portions.	Acres.	Whole Villages.	Portions.	Acres.		
Shikarpoor.	62	63,805	10,652 1 0 ...	606	11,418	18,382 10 9	1,07,865 2 6 ...	213	5,067	7,461 2 8	25,285 2 9 ...	819	16,485	25,803 13 8	1,33,151 5 3	7 = 5,852	5460 = 41,211	47,063	287 acres confiscated for rebellion.

S. N. MARTIN,
Collector.

Supplement to the Statement showing the effects of alienation by sale in execution of Decrees of Court, or by private Transfer, during the currency of the Settlement in the Tehseel of Boorhana.

Pergunnah.	PRIVATE TRANSFERS.			PRIVATE TRANSFERS.			BY ORDER OF COURT.			BY ORDER OF COURT.			EXEMPT FROM TRANSFERS.		
	Caste of Transferrers.	Whole vil-lages.	Portions.	Caste of Transferee.	Whole vil-lages.	Portions.	Whole vil-lages.	Portions.	Caste of Transferee.	Whole vil-lages.	Portions.	Whole vil-lages.	Whole vil-lages.	Portions.	Acres.
Afghan,	82=2,735	Afghan,	...	29 = 855	...	38 = 1,273	Afghan,	...	14 = 248	...	...	...	231 = 3,524
	Sheikhsada,	...	4 = 9	...	...	Mahajun,	...	13 = 378	...	...	...	...
	Mahajun,	...	29 = 1,362	...	...	Behora,	...	2 = 83	...	...	...	...
	Khutree,	...	2 = 7	...	...	Choonapuz,	...	2 = 55	...	...	...	...
	Behora,	...	3 = 9	...	...	Brahmin,	...	1 = 3	...	...	...	...
	Choonapuz,	...	5 = 85	...	...	Murhul,	...	6 = 506	...	...	...	...
	Raen,	...	5 = 60	...	...	...	...	...	...	...	...	...
	Fukeer,	...	1 = 12	...	...	...	...	...	...	...	...	...
	Kayeth,	...	1 = 21	...	...	...	...	...	...	...	...	...
	Murhul,	...	3 = 415	...	...	...	...	...	...	...	...	...
Total,	82=2,735	Total,	...	82 = 2,735	...	38 = 1,273	Total,	...	38 = 1,273	...	1 = 883	...	231 = 3,524
Tugga,	19=291	Mahajun,	...	1 = 2	...	30 = 420	Mahajun,	...	14 = 210	...	5 = 4,864	...	707 = 3,172
	Tugga,	...	13 = 129	...	...	Tugga,	...	12 = 120	...	...	...	...
	Brahmin,	...	3 = 26	...	...	Brahmin,	...	1 = 3	...	...	...	...
	Rajpoot,	...	2 = 124	...	...	Rajpoot,	...	3 = 87	...	...	...	...
Total,	19=291	Total,	...	19 = 291	...	30 = 420	Total,	...	30 = 420	...	5 = 4,864	...	707 = 3,172

BHUKARPOOR.

Supplement to the Statement showing the effects of alienation by sale in execution of Decrees of Court, or by private Transfer, during the currency of the Settlement in the Tehseelee of Boorhana.—(concluded.)

Pergunnah.	PRIVATE TRANSFERS.			PRIVATE TRANSFERS.			BY ORDER OF COURT.			BY ORDER OF COURT.			EXEMPT FROM TRANSFERS.	
	Caste of Transferees.	Whole vil-lages.	Portions.	Caste of Transferees.	Whole vil-lages.	Portions.	Whole vil-lages.	Portions.	Caste of Transferees.	Whole vil-lages.	Portions.	Whole vil-lages.	Whole vil-lages.	Portions.
			Acres.			Acres.					Acres.		Acres.	Acres.
Rajpoot, ...	Rajpoot, ...	...	8 = 251	Rajpoot, ...	...	2 = 109	...	5 = 122	Rajpoot, ...	...	5 = 122	...	...	77 = 1,655
Total, ...	Total, ...	...	8 = 251	Total, ...	...	8 = 251	...	5 = 122	Total, ...	...	5 = 122	...	...	77 = 1,655
Jat, ...	Jat, ...	...	443 = 6,517	Jat, ...	...	222 = 3,186	...	139 = 3,084	Jat, ...	...	40 = 723	1 = 105	...	3,964 = 25,177
	Mahajun, ...	...		Mahajun, ...	...	173 = 2,648	...		Mahajun, ...	...	68 = 2,092	...	...
	Brahmin, ...	...		Brahmin, ...	...	10 = 255	...		Brahmin, ...	...	2 = 8	...	...
	Roghungur, ...	...		Roghungur, ...	...	1 = 9	...		Afghan, ...	...	1 = 21	...	...
	Afghan, ...	...		Afghan, ...	...	5 = 121	...		Beshora, ...	...	20 = 165	...	...
	Behora, ...	...		Behora, ...	...	11 = 117	...		Tugga, ...	...	1 = 1	...	...
	Goldsmith, ...	...		Goldsmith, ...	...	2 = 4	...		Sheikhzada, ...	...	6 = 42	...	...
	Syud, ...	...		Syud, ...	...	1 = 1	...		Rajpoot, ...	...	1 = 32	...	...
	Gobaseen, ...	...		Gobaseen, ...	...	5 = 62	...							
	Tugga, ...	...		Tugga, ...	...	1 = 1	...							
	Sheikhzada, ...	...		Sheikhzada, ...	...	2 = 113	...							
Total, ...	Total, ...	...	443 = 6,517	Total, ...	...	443 = 6,517	...	139 = 3,084	Total, ...	...	139 = 3,084	1 = 105	...	3,964 = 25,177

FOOT.—(concluded.)

Mahajun,	...	...	30 = 1,456	Rajpoot, Mahajun, Murthi, Kayeth, Behora, Brahmin, Jat,	...	...	3 = 150 13 = 816 1 = 478 4 = 4 5 = 1 1 = 1 3 = 6	...	1 = 168	Mahajun,	...	1 = 168	...	1 = 168	...	125 = 879
Total,	...	...	30 = 1,456	Total,	...	...	30 = 1,456	...	1 = 168	Total,	...	1 = 168	...	125 = 879		
Sheikhzade,	...	...	17 = 139	Sheikh, Behora, Mahajun, Kaeth,	...	...	5 = 47 2 = 4 7 = 62 3 = 16	...	...	...	...	...	...	193 = 609		
Total,	...	...	17 = 139	Total,	...	...	17 = 139	...	...	Total,	...	...	...	193 = 609		
Kaeth,	...	...	7 = 10	Kayeth, Mahajun, Behora,	...	...	2 = 2 2 = 3 3 = 5	...	...	...	...	...	...	111 = 903		
Total,	...	...	7 = 10	Total,	...	...	7 = 10	...	...	Total,	...	...	...	111 = 903		
Fakeer, Syud,	...	...	1 = 7 2 = 9	Mahajun, Syud, Behora,	...	...	1 = 7 1 = 4 1 = 5	...	...	...	...	...	...	1 = 3 8 = 34		
Total,	...	...	...	Total,	...	...	2 = 9	...	...	Total,	...	...	...	9 = 37		
Barber, (Hujjan), Dhobee, Brahmin, Peersada, Nuzzool,	...	...	2 = 1 3 = 1 2 = 11 ...	Mahajun, Mahajun, Mahajun,	...	...	2 = 1 3 = 1 2 = 11 ...	...	...	...	...	...	...	42 = 187 0 = 23 1 = 46		
Total,	...	...	606 = 11,418	Total,	...	...	606 = 11,418	...	213 = 5,067	Total,	...	213 = 5,067	7 = 5,853	5,460 = 41,311 = 257 acres confiscated for rebel- lion.		

S. N. MARTIN,
Collector.

Supplement to the Statement showing the effects of alienation by sale in execution of Decrees of Court, or by private Transfer, during the currency of the Settlement in the Tehseel of Boorhana.—(concluded.)

Pergunnah.	PRIVATE TRANSFERS.			PRIVATE TRANSFERS.			BY ORDER OF COURT.			BY ORDER OF COURT.			EXEMPT FROM TRANSFERS.		
	Caste of Transferees.	Whole vil-lages.	Portions.	Caste of Transferees.	Whole vil-lages.	Portions.	Caste of Transferees.	Whole vil-lages.	Portions.	Caste of Transferees.	Whole vil-lages.	Portions.	Whole vil-lage.	Portions.	Acres.
	Rajpoot, ...	...	8 = 251	Rajpoot, ...	...	2 = 109	Rajpoot, ...	...	5 = 122	...	...	...	Acres.	77 = 1,655	
	Brahmin, ...	...	6 = 142	Brahmin, ...	...	6 = 142	...	...	...	...	...	...	...	...
	Total, ...	...	8 = 251	Total, ...	...	8 = 251	Total, ...	...	5 = 122	...	...	...	...	77 = 1,655	
Jat,	Jat, ...	...	443 = 6,517	Jat, ...	...	222 = 3,186	Jat, ...	...	139 = 3,084	Jat, ...	...	40 = 723	1 = 105	3,964 = 25,177	
	Mahajun, ...	...	173 = 2,648	Mahajun, ...	...	173 = 2,648	Mahajun, ...	...	...	Mahajun, ...	...	68 = 2,092	...	...
	Brahmin, ...	...	10 = 255	Brahmin, ...	...	10 = 255	Brahmin, ...	...	...	Brahmin, ...	...	2 = 8	...	...
	Boghungur, ...	...	1 = 9	Boghungur, ...	...	1 = 9	Boghungur, ...	...	...	Afghan, ...	...	1 = 21	...	...
	Afghan, ...	...	5 = 121	Afghan, ...	...	5 = 121	Afghan, ...	...	...	Beahora, ...	...	20 = 165	...	...
	Behora, ...	...	11 = 117	Behora, ...	...	11 = 117	Tugga, ...	...	...	Tugga, ...	...	1 = 1	...	...
	Goldsmith, ...	...	2 = 4	Goldsmith, ...	...	2 = 4	Sheikhzada, ...	...	...	Sheikhzada, ...	...	6 = 42	...	...
	Syud, ...	...	1 = 1	Syud, ...	...	1 = 1	Rajpoot, ...	...	...	Rajpoot, ...	...	1 = 32	...	...
	Goahaeen, ...	...	5 = 62	Goahaeen, ...	...	5 = 62	...	...	...	...	...	...	...	...
	Tugga, ...	...	1 = 1	Tugga, ...	...	1 = 1	...	...	...	...	...	...	...	...
	Sheikhzada, ...	...	2 = 113	Sheikhzada, ...	...	2 = 113	...	...	...	...	...	...	...	...
Total, ...	Total, ...	...	443 = 6,517	Total, ...	...	443 = 6,517	Total, ...	...	139 = 3,084	Total, ...	...	139 = 3,084	1 = 105	3,964 = 25,177	

POOR.—(concluded.)

Mahajun,	...	...	30 = 1,456	Rajpoot, Mahajun, Murul, Kayeth, Behora, Brahmin, Jat,	...	...	3 = 150 13 = 816 1 = 478 4 = 4 5 = 1 1 = 1 3 = 6	...	1 = 168	Mahajun,	...	1 = 168	...	125 = 879
Total,	...	...	30 = 1,456	Total,	...	...	30 = 1,456	...	1 = 168	Total,	...	1 = 168	...	125 = 879
Sheikhada,	...	...	17 = 129	Sheikh, Behora, Mahajun, Kaeth,	...	...	5 = 47 2 = 4 7 = 62 3 = 16	...	...	...	...	...	...	193 = 609
Total,	...	...	17 = 129	Total,	...	...	17 = 129	...	...	Total,	...	...	...	193 = 609
Kaeth,	...	...	7 = 10	Kayeth, Mahajun, Behora,	...	...	2 = 2 2 = 3 3 = 5	...	...	...	...	...	...	111 = 902
Total,	...	...	7 = 10	Total,	...	...	7 = 10	...	...	Total,	...	...	...	111 = 902
Fakeer, Syud,	...	...	1 = 7 2 = 9	Mahajun, Syud, Behora,	...	...	1 = 7 1 = 4 1 = 5	...	...	...	...	...	...	1 = 3 8 = 34
Total,	...	...	...	Total,	...	...	2 = 9	...	...	Total,	...	...	...	9 = 37
Barber, (Hujjan), Dhobee, Brahmin, Peerzada, Nuzzool,	...	...	2 = 1 3 = 1 2 = 11 ...	Mahajun, Mahajun, Mahajun,	...	...	2 = 1 3 = 1 2 = 11 ...	...	...	...	...	...	...	42 = 187 0 = 23 1 = 46
Total,	...	...	606 = 11,418	Total,	...	...	606 = 11,418	...	213 = 5,067	Total,	...	213 = 5,067	7 = 5,852	5,460 = 41,211 = 257 acres confiscated for rebel- lion.

S. N. MARTIN,
Collector.

Statement showing amount of profits in the Pergunnah Shikarpoor attributable to the Eastern Jumna Canal.

1	2	3	4	5	6	7	8	9	10	11	12
Pergunnah.	Number of villages irrigated by Canal.	Area under Canal irrigation.	Former aggregate Jumna of these villages.	New Jumna.	Increase.	Portion of increase attributable exclusively to influence of Canal.	Number of Villages injuriously effected by Canal.	Former Jumna.	New Jumna.	Portion of decrease attributable to the influence of the Canal.	Net gain to the revenue of the Pergunnah from the influence of Canals.
Shikarpoor	8	1,865	Ra. a. p. 29,646 8 0	25,986	...	Ra. a. p. 2,277 0 0	...	...	...	...	Ra. a. p. 2,277 0 0

S. N. MARTIN,
Collector.

Statement of descriptions of Soil, irrigated and unirrigated Areas.

TOTAL MALGOUZAREE AREA.											
Name of Pergunnah.	TOTAL CULTIVATED AREA IN ACRES.										
	Meesun.	Roslee.	Dakur.	Bhoor.	Total of irrigated land.		Total of un-irrigated land.	Total of land recently thrown out of cultivation.	Total of culturable land.	LAND NOT ASSESSABLE.	
					By Canals, &c.	By Wells.				Waste.	Rent-free.
Shikarpoor,...	13,478	30,794	1,044	3,171	1,865	19,343	● 27,279	1,216	4,707	8,477	1,128
	Irrigated.	Irrigated.	Irrigated.	Irrigated.	21,203		48,487				
	By Wells.	By Wells.	By Wells.	By Wells.							
	12,394	6,728	167	54							
	Unirrigated.	Unirrigated.	Unirrigated.	Unirrigated.							
	405	22,990	767	3,117							

S. N. MARTIN,
Collector.

Comparative Statement of Cultivators with and without right of Occupancy, and of cultivating Proprietors, Pergunnah Shikarpoor.

Year.	Cultivators having right of occupancy.	Amount of land held by them in acres.	Average of cultivation in acres.	Tenants-at-will in acres.	Amount of land cultivated by them in acres.	Average of cultivation in acres.	Cultivating proprietors in acres.	Land cultivated by them in acres.	Average of cultivation in acres.	Remarks.
1840,	1,030	6,527	A. R. P. 6 1 14	3,473	13,567	A. R. P. 3 3 25	3,967	25,100	A. R. P. 6 1 12	
1860,	2,668	7,496	2 3 9	5,864	15,195	2 3 15	4,420	25,796	5 3 14	
Decrease, ...	...	...	3 2 5	...	...	1 1 10	...	...	0 1 38	
Increase, ...	1,638	969	...	2,388	1,628	...	453	696	...	

S. N. MARTIN,
Collector.

Statement of Villages paying Rents in money and in kind.

Name of Pergunnah.	Total number of villages.	Total number of whole villages in which rent in money has been fixed instead of that in kind.	Whole villages in which money rents as previously prevailed.	Villages in which rent in kind prevails.	Cultivators paying rent in kind.	Cultivators paying rent in money.	Remarks.
Shikarpoor, ...	62	1	1	60 Villages, in which only rent in kind prevails. 5 Villages in which both sorts of rent prevail.	5,708	2,684	

S. N. MARTIN,
Collector.

Statement showing the various Crops sown at the time of Measurement, Pergunnah Shikarpoor.

Pergunnah.	RUBBER.		KHURREF.																																				
	Total amount of cultivated land in acres.		Wheat.	Barley.	Gram.	Fallow land.	Tobacco.	Vegetables.	Bales.	Gajur.	Gojee.	Totiah.	Mutter.	Gram and Harley.	Payaz ((Union).	Mussoor.	Kurrur.	Kungnee.	Total.	Sugar-cane.	Churree.	Mukkee.	Baree.	Oorud.	Sugar-cane recently planted, and cut the following year.	Chohara.	Dhan.	Sanwuk.	Moongjee.	Jowar.	Bajra.	Mundwa.	Kunwara.	Mote.	Moong.	Mote—Bajra.	Mote—Jowar.	Kunwar—Bajra.	Total.
Shikarpoor.	48,487	100	9,255	735	335	12,640	15	74	64	51	74	11	62	1	28	38	2	...	23,385	3,650	6,869	1,021	1,304	1,650	417	44	655	390	188	2,135	274	128	741	5,424	184	20	43	15	25,102
			19	14	4	26	...	4	48	74	14	24	3	34	1	...	14	4	4	5	4	4	14	11	4

S. N. MARTIN,
Collector.

Statement of Pukka Masonry Wells used for Irrigation.

Name of Pergunnah.	Pukka wells at the last Settlement.	Masonry wells at the present Settlement.	Wells that are out of repair.	Remarks.
Shikarpoor, ...	339	422	35	

S. N. MARTIN,
Collector.

Statement showing amount of profits in the Pergunnah of Bugra attributable to the Eastern Jumma Canal.

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
Pergunnah.	No. of villages irrigated by canal.	Area in acres under canal irrigation.	Former aggregate jumma of these villages.	New jumma.	Increase.	Portion of increase attributable exclusively to influence of canal.	No. of villages injuriously affected by canal.	Former jumma.	New jumma.	Portion of decrease attributable to the influence of the canal.	Net gain to the revenue of the pergunnah from the influence of the canal.
Bugra,	15	4,880	21,002	21,520	518	* 3,227	...	...	...	...

* Second revised Estimates.

The increase in column 7 is derived from the difference between the irrigated and unirrigated rates of the fifteen mouzas. Wells have entirely fallen into disuse in these estates, so that were it not for the Canal the assessment would for the greater part have been computed at unirrigated rates, and there would then have been a reduction on the old jumma according to the half asset principle.

I have, however, allowed 22 acres for each well with one run, 44 acres for wells with two runs, and so on, as the average area irrigable, after deducting this the balance may fairly be considered attributable to the canal.

S. N. MARTIN,
Collector.

Statement showing the tenures on which the Mehals of Zillah Mooruffernuggur are held.

Pergunnah.	Zemindaree.	Putteedaree.	Bhyachara.	Total.
Bugra.	Ameernuggur Puttee, Bukhtawur Sing. Do. Puttee Shumsher Khan. Bazeedpoor. Bugra Puttee, Jeeta Hurdial. Do. Puttee, Seetul Bahadur. Dhunsainee. Dhowiree. Secunderpoor. Shahpoor. Tahirpoor. Zufferpoor. Qumer Oodeennuggur. Kazee Khaira. Muksoodpoor Brahminan,	Atalee. Burwala. Boodeena Khoord. Bhowapoor. Peepulhaira. Jagahairee. Jessowee. Jullalpoor. Chattaila. Hydernuggur. Doorgunpoor. Dhindaolee. Sanjuk. Soujnee. Zufferpoor Puttee, Shumsher Khan. Aleepoora Khoord. Aleepoora Kulan. Kanounee. Kabeerpoor. Kurwara. Khutawla. Khairree Doodadharee. Goojurhairee. Ludwa. Lakhan. Nirmanee. Nurotumpoor. Nusseerpoor. Nowada.	Bugra Puttee, Awan. Do. Puttee, Toorkman. Do. Puttee, Chukmaafee. De. Puttee, Moradpoora. Boodeena Kulan. Peenna. Taolee. Titavee. Chirowlee. Dhowiree Puttee, Dehkana. Sydpooora. Shumaspoor. Salakhairree. Kifayetpoor. Koothee. Khurunja. Lalookhairee. Luburda. Mohummudpoor. Maundun. Muksoodpoor Jatun. Mokundpoor. Mundee. Nirmana. Nugh Pithoura. Noonakhaira. Hursowlee Puttee, Anwur. Do. Puttee, Oodho. Do. Puttee, Bubroo. Do. Puttee, Bahal. Do. Puttee, Bahadur. Do. Puttee, Khodadia. Do. Puttee, Hurdial.	
Total,	14	29	32	75

S. N. MARTIN,
Collector.

Statement of descriptions of soil, irrigated and unirrigated areas in acres.

Name of Pergunnah.	TOTAL MALGOOZAREE AREA.										LAND NOT ASSESS- ABLE.		Remarks.	
	TOTAL CULTIVATED AREA IN ROZRA.										Total of culturable land.	Waste.		Rent-free.
	Meesun.	Roosce.	Dakur.	Bhoor.	Total of irrigated land.		Total of unirrigat- ed land.	Total of land recently thrown out of cultiva- tion.						
					By Canals.	By wells.								
Bogra,	9,666	28,561	1,973	1,838	4,880	14,016	23,142	2,939	4,875	6,363	539	The unirrigated area consi- derably exceeds the irrigated area. What little there is to admire in this Pergunnah is due to the industry of that ad- mirable community, the indus- trious Jats, who appear to have settled down in this Per- gunnah from a very ancient date.		
	Irrigated by wells. 7,542	Irrigated by wells. 6,132	Irrigated by wells. 264	Irrigated by wells. 78										
	By Canals. 1,969	By Canals. 2,621	By Canals. 290	Unirrigated. 1,760										
	Unirrigated. 165	Unirrigated. 19,808	Unirrigated. 1,419											

S. N. MARTIN,
Collector.

Comparative statement of Cultivators with and without right of occupancy and of cultivating proprietors.

Name of Pergunnah.	Year.	Cultivators having right of occupancy.	Amount of land held by them in acres.	Average of cultivation.	Tenants at will.	Amount of land cultivated by them.	Average of cultivation.	Cultivating proprietors.	Land cultivated by them.	Average of cultivation.	Remarks.
				A. R. P.			A. R. P.			A. R. P.	
Bugra,	1840 ..	1,310	6,856	4 3 16	2,560	12,956	5 0 0	1,744	16,900	9 3 0	All classes of cultivators increasing in numbers, and the extent of their holdings decreasing in proportion. In this pergunnah prevalence of cultivation is most numerous as the number of proprietors increases both classes of tenants get gradually elbowed out, there is clearly not room enough for all of them.
Increase,	1860 ..	2,447	9,471	3 2 15	5,012	12,436	2 1 37	2,992	20,131	6 2 23	The amount of land held by each class is much less in this than in the neighbouring pergunnah of Mozuffernuggur. These "Bhyachara" estates have in themselves the seed of self-destruction.
Decrease,	...	1,137	3,115	...	2,423	...	...	1,346	3,231	...	
	...	...	...	1 1 1	...	530	3 2 3	...	...	3 0 17	

S. N. MARTIN,
Collector.

Statement of Villages paying rents in money and in kind.

Name of Pergunnah.	Total number of villages.	Total number of whole villages in which rent in money has been fixed instead of that in kind.	Villages in which rent in kind prevails.	Cultivators paying rent in kind.	Cultivators paying rent in money.	Remarks.
Bugra,	75	4	67	4,703	1,652	
			15 villages in which only rent in kind prevails. 52 villages in which both sorts of rent prevail.			

S. N. MARTIN,
Collector.

Statement of Pukka Masonry wells used for irrigation.

Name of Pergunnah.	Masonry wells at the last Settlement.	Masonry wells at the present Settlement.	Wells that are out of repair.	Remarks.
1	2	3	5	5
Bugra,	498	485	85	If columns 3 and 4 be added, the difference between the result and column 2 (viz. 72 wells) gives the excess of wells in 1862 over the number at the last settlement, but then some are in utterly bad repair, not fit for use.

S. N. MARTIN,
Collector.

A.
Statement showing the effects of alienation by sales in execution of decrees of Court, or by private transfer during the currency of the past Settlement in the Tehsilees of Moosuffer-nuggur, Pergunnah of Bugra.

Name of Pergunnah.	Number of Villages.	Area in acres.	PRIVATE TRANSFERS.					TRANSFERS BY ORDER OF COURT.					TOTAL.					EXEMPT FROM TRANS-FEE.			Remarks.																													
			Whole Villages.	Portions.	Acres.	Jumma.	Value.	Whole Villages.	Portions.	Acres.	Jumma.	Value.	Whole Villages.	Portions.	Acres.	Whole Villages.	Portions.	Acres.																																
75	54,895	86,362	8	3	..	296	12,395	15,865	0	0	35,281	10	0	...	238	3,869	5	879	7	10	19,001	11	3	...	534	16,264	21,745	7	10	54,263	5	3	18=	1,903=	38,401	The private transfers have been, 23 per cent. By order of Court, 7 1/2 " Exempt, 69 1/2 " Confiscated for rebellion, 1/2 " TOTAL, .. 100														
																					The price fetched by private transfer is less than double the jumma which, if true, shows that property has not been much sought after in this pergunnah.										By order of Court the price fetched at sale has been a little more than three times the jumma; both these figures show that the price of land in this pergunnah has been very low.										Looking at the number of transfers and the amount of acreage included in the sales, nearly one-third of the pergunnah may be considered to have changed hands.									

S. N. MARTIN, Collector.

Statement showing the Tenures on which the Mehals of Zillah Moozuffernuggur are held.

Pergunnah.	Zemindaree.	Putteedaree.	Bhyachara.	Total.
JHINJHANA.	Odree. Bhumpheree Shahpoor. Byed Kheree. Tarapoor. Tuprana Goojran. Allaooddeenpoor. Gurhee Meranbhaseekhan.	Umbehta. Buhara. Paotee Khoord. Puttee Panthoopoora. Puttee Purbtabpoor. Choonghyaree. Hussunpoor. Simbhalka. Shahjehanpoor. Khairkee. Gurhee Hussunpoor. Moondeith. Hursana. Hoshungpoor.	Akrapoor oorf Phoosgurh. Emamnuggur. Oon. Beebeepoor Jellalabad. Bujhairee. Bassniee. Bhatoo. Puhelka. Poor. Peerkhara. Panthoopoora. Pindora Jehangeerpoor. Tana. Tuprana Afghanan. Do. Jatan. Jumalpoor. Qusbah Jhinjhana. Chowndaheree. Khanpoor. Duthera. Dirughpoor. Doollakheree. Dhindhalee. Rahutpoor. Rajhur. Ruzzaknuggur. Rungana. Sanpls. Soojankheree. Sikundurpoor. Shamlee Shamla. Tahurpoor. Eesa Muzra. Kururwa. Kheree Khooshnam. Khara Bhao. Gagour. Gungarampoor. Lawly Dadoopoor. Malendes. Nae Nugla. Nagoo Muzra. Now Naglee. Hatchhoha.	
Total.	7 mouzahs.	14	44	65

A.

Statement showing the effects of Alienation by Sales in execution of Decrees of Court, or by private transfer, during the currency of the past Settlement in the Tehsees of Shamlee.

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.
Name of Pergunah.	Number of Villages.	Area in Acres.	Jumma.	Whole Village.	Portions.	Acres.	Jumma.	Value.	Whole Village.	Portion.	Acres.	Jumma.	Value.	Whole Village.	Portion.	Acres.	Jumma.	Value.	Whole Village.	Portions.	Acres.
JHINJHANA.	58	52,489	60,975 0 0	1=497	434=6,760	7,257	11,018 7 3	59,763 0 0	1=653	84=1,168	1,821	2,623 11 9	7,626 4 3	2=1,150	518=7,928	9,078	13,642 3 0	67,389 4 3	4=2,194	3,327=41,123	43,317
	Mafee.			Acres.	Acres.		Whole Vil-lages.	Whole Vil-lages.	Acres.	Acres.		Whole Vil-lages.	Whole Vil-lages.	Acres.	Acres.		Whole Vil-lages.	Whole Vil-lages.	Acres.	Acres.	
	7						510 0 0	1,250 0 0				400 0 0	529 12 3				910 0 0	1,779 12 3			
	65						Portion.	Portions.				Portions.	Portions.				Portions.	Portions.			
							10,508 7 3	58,513 0 0				2,223 11 9	7,096 8 0				12,732 3 0	66,609 8 0			

Remarks.—The 434 portions in column 6 are equivalent to 434 transfers and 616 parties.
 The 84 portions in column 11 are also equivalent to 84 transfers and 78 parties.
 The 8,327 in column 21 are equivalent to 3 parties.

A. COLVIN,
Settlement Officer.

S. N. MARTIN,
Collector.

B.

Supplement to the Statement showing the effects of Alienation by Sale in execution of Decrees of Court, or by private transfer, during the currency of the past Settlement in the Tehseel of Shamlee.

Pergunnah.	PRIVATE TRANSFERS.			Caste of Transferees.	PRIVATE TRANSFERS.			Caste of Transferees.	BY ORDER OF COURT.			Caste of Transferees.	BY ORDER OF COURT.			EXEMPT FROM TRANSFERS.		
	Whole Vil- lage.	Portions.	Acres.		Whole Vil- lage.	Portions.	Acres.		Whole Vil- lage.	Portions.	Acres.		Whole Vil- lage.	Portions.	Acres.	Whole Vil- lage.	Portions.	Acres.
Jat,	...	208= 2,041	1=497	Jat, Syud, Brahmin, Mahajun, Behora, Khutree,	...	86= 492 15= 554 34= 175 58= 615 7= 85 6= 120	...	Jat, Mahajun, Syud, Khutree, Brahmin, Goldsmith, Behora,	...	54= 564	15= 103 26= 352 3= 29 3= 14 2= 14 3= 42 2= 10	...	...	...	1,264=17,947
Total,	...	208= 2,041	1=497	Total,	...	208=2,041	...	Total,	...	54= 564	...	...	...	...	1,264=17,947
Rajpoot,	...	25= 416	...	Rajpoot, Mahajun, Brahmin, Khutree, Jat,	...	9= 103 3= 106 7= 130 5= 46 1= 31	...	Brahmin, Mahajun, ...	...	2= 41	1= 38 1= 3	...	2= 1420	...	297= 7,061		
Total,	...	25= 416	...	Total,	...	25= 416	...	Total,	...	2= 41	2= 41	...	2= 1420	...	297= 7,061			
Afghan,	...	27= 1,378	...	Afghan, Mahajun, Syud, Barber, Blacksmith,	...	17= 1,129 7= 156 1= 10 1= 82 1= 1	...	Mahajun, ...	...	2= 67	2= 67	...	...	...	214= 3,353
Total,	...	27= 1,378	...	Total,	...	27= 1,378	...	Total,	...	2= 67	2= 67	...	...	...	214= 3,353
Goojur,	...	22= 1,203	...	Syud, Mahajun, Goojur, Afghan, Khutree,	...	7= 662 8= 491 1= 14 4= 16 2= 20	...	Mahajun, Murhal, Government,	...	4= 53	3= 36 1= 17 ...	...	2= 774	...	251= 4,666		
Total,	...	22= 1,203	...	Total,	...	22= 1,203	...	Total,	...	4= 53	4= 53	...	2= 774	...	251= 4,666			

B.

Supplement to the Statement showing the effects of Alienation by Sale in execution of Decrees of Court, or by private transfers, during the currency of the past Settlement in the Tehseel of Shamlee.—(concluded.)

Pergunnah.	PRIVATE TRANSFERS.			Caste of Transferees.	PRIVATE TRANSFERS.			Caste of Transferees.	BY ORDER OF COURT.			Caste of Transferees.	BY ORDER OF COURT.			EXEMPT FROM TRANSFERS.	
	Whole Village.	Portions.	Acres.		Whole Village.	Portions.	Acres.		Whole Village.	Portions.	Acres.		Whole Village.	Portions.	Acres.	Whole Village.	Portions.
Beloch,	...	9=478	...	...	...	...	1=72 6=989 1=77 1=40	...	...	...	5=904	Beloch, Mahajun,	...	4=179 1=25	...	...	...
Total,	...	9=478	...	Total,	...	...	9=478	...	...	...	5=904	Total,	...	5=904	...	...	82=1,387
Mahajun,	...	22=336	...	...	...	...	4=33 13=169 1=126 1=2 3=7	...	...	...	4=27	Mahajun, Jat,	...	1=1 3=26	...	...	294=1,563
Total,	...	22=336	...	Total,	...	...	22=336	...	...	...	4=27	Total,	...	4=27	...	...	294=1,563
Syud,	...	31=110	...	...	...	...	4=11 5=41 17=41 5=17	...	...	...	...	...	...	...	...	...	12=94
Total,	...	31=110	...	Total,	...	...	31=110	...	...	...	...	...	...	...	...	...	12=94
Brahmin,	...	17=448	...	...	...	...	7=28 2=170 8=260	...	...	...	7=144	Mahajun,	...	7=144	...	...	171=1,191
Total,	...	17=448	...	Total,	...	...	17=448	...	...	...	7=144	Total,	...	7=144	...	...	171=1,191

JHIMSHAWA.

Profits due to Canal.

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
Pergunnah.	Number of villages irrigated by Canal.	Area under Canal irrigation.	Former aggregate jumma of these villages.	New jumma.	Increase.	Portion of increase attributable exclusively to influence of Canal.	Number of villages injuriously affected by Canal.	Former Jumma.	New Jumma.	Portion of decrease attributable to the influence of the Canal.	Nett gain to the revenue of the pergunnah from the influence of Canals.
Jhinjhana,	26	Acrea. 5,138	31,375	Rs. 31,085	...	Rs. 2,767	...	..	...	...	2,767 If there had not been a canal, the jumma at half assets would have fallen lower than it has by this amount.

Note.—In preparing this statement the number of wells out of work, owing to introduction of canal, have been allowed for at the rate of 22 acres annual irrigation to each well. They have been deducted from each kind of soil in the proportion which it was found that each kind of soil was irrigated throughout the pergunnah. The difference between the irrigated and unirrigated rates of the remainder gives the amount of profit.

S. N. MARTIN,
Collector.

Statement of Descriptions of Soil irrigated and unirrigated areas.

TOTAL MALGOOZAREE AREA.										LAND NOT ASSESSABLE.	
TOTAL CULTIVATED AREA IN ACRES.											
Name of Pergunnah.	Meesun.	Rouslee.	Dakur.	Bhoor.	Total of irrigated land.		Total of unirrigated land.	Total of land recently thrown out of cultivation.	Total of culturable land.	Waste.	Rent-free.
					By canals, &c.	By wells.					
	4,302 Irrigated by wells, 3,483 By Canals, &c., 787 By other means, 14 Unirrigated, 18	16,337 Irrigated by wells, 9,024 By Canals, &c., 3,177 By other means, 73 Unirrigated, 4,063	2,581 Irrigated by wells, 712 By Canals, &c., 1,065 By other means, 177 Unirrigated, 637	1,791 Irrigated by wells, 682 By Canals, &c., 109 By other means, 5 Unirrigated, 995	5,138	14,170 By wells, 13,901 By other means, 269	5,703	4,920	14,066	9,040	4,399
	Mafee Villages, 122 For 3 vil- } Well 101 lages only } Canal 31	1,165 478 542 By other means, 8 Unirrigated, 137	263 11 125 By other means, 72 Unirrigated, 55	Former Settlement= 16 Unirrigated, 16	...	25,011 29,557 670 By wells, 690 By other means, 80	...	1,630 196	15,799 568	5,184 351	525 ...

The greater part of the recently abandoned land was rain-land, thrown out of cultivation by the drought of 1860-61, or the disturbances of 1857-58.
The culturable land is chiefly dhak jungle.
Total area=94 square miles. Population=306 per square mile.

A. COLVIN, Settlement Officer.

S. N. MARTIN, Collector.

No. II.
Comparative Statement of Cultivators with and without right of Occupancy and of Cultivating Proprietors.

Name of Pergunnah.	Year.	Cultivators having right of occupancy.	Amount of land held by them.	Average of cultivation.	Tenants-at-Will.	Amount of land cultivated by them.	Average of cultivation.	Cultivating proprietors.	Land cultivated by them.	Average of cultivation.
Jhinjhana,	...		Acres.	A. R. P.		Acres.	A. R. P.			A. R. P.
		16	125	7 3 10	2,113	8,924	4 0 36	1,916	19,576	10 0 35
		549	843	1 1 17	2,015	7,742	3 2 39	2,038	16,426	8 0 1
		Deduct 9 villages.	Deduct 9 villages.		Deduct 9 villages.	Deduct 9 villages.		Deduct 9 villages.	Deduct 9 villages.	
		61	180		59	420		97	886	
		Balance 438	Balance 663		Balance 1,956	Balance 7,322		Balance 1,941	Balance 15,540	
Decrease,	6 1 33	157	1,602	0 1 37	...	4,036	2 0 34
Increase,	...	472	538	...	...	...	...	25	...	...

The villages to be "deducted" are those of which the former settlement records are not forthcoming. They are inserted for uniformity; but are not available for comparison, and have not been included in the average.

A. COLVIN,
Settlement Officer.

S. N. MARTIN,
Collector.

No. 3.
Statement of Villages paying rents in Money and in Kind.

Name of Pergunah.	Total number of villages.	Total number of whole villages in which rent in money has been fixed instead of that in kind.	Whole villages in which money-rent previously prevailed.	Villages in which rent in kind prevails.	Cultivators paying rent in kind.	Cultivators paying rent in money.	Remarks.
Jhalajhara, ...	62	...	1=15 Cultivators.	58= 18 villages in which only rent in kind prevails. 40 villages in which both sorts of rent prevail.	1,467	1,082	
	Khalisa. 58						
	Resumed masafce. 4						

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A. COLVIN,
Settlement Officer.

S. N. MARTIN,
Collector.

No. 4.

Statement of Pukka Masonry wells used for irrigation.

Masonry wells at the present Settlement.	Wells that are out of repairs.
808	134

A. COLVIN,
Settlement Officer.

S. N. MARTIN,
Collector.

No. 5.
Statement of various kinds of Crops grown at the time of measurement.

Name of Pergunah.	JHINTHANA.		KHURREEF.																				RUBBER.							
	Cultivated area in acres.	Sugar-cane.	Sugar-cane for the next year.	Cotton.	Chutree.	Dhan.	Chuhora Moonjee.	Jowar.	Oorud.	Mol.	Bayrah.	Gowarah.	Vegetables.	Mundwa.	Mukkee.	Toriya.	Tobacco.	Moong.	Sunee or Hemp.	Kodo Shammakh.	Chenna, kungnee.	Wheat.	Barley.	Gram.	Wheat and barley.	Wheat and gram.	Musoor.	Kurur.	Sirsuff or mustard.	Mutra or peas.
	25,011	1,442	51	829	4,569	49	1,320	222	383	503	182	372	112	355	1,026	447	80	7	7	6	34	11,699	465	674	68	22	81	1	4	2
	100	6	...	3½	18½	...	5½	1	1½	2	0½	1½	0½	1½	4	2	0½	...	...	...	...	47	2	2½	0½	...	0½	...	...	...

A. COLVIN,
Settlement Officer.

S. N. MARTIN,
Collector.

Statement showing the tenures on which the mehals of Zillah Moosuffernuggur are held.

Pergunnah.	Zemindaree.	Putteedaree.	Bhyachara.	Total.
CHURTHAWUL.	Akburgurh.	Arnauch.	Begumpore.	
	Akhlour.	Budhaee Khoord.	Buheree Mirzapore.	
	Bannuggur.	Ditto Kulan.	Burkulee Salempore.	
	Jut Nugla.	Bhumbheyla.	Biralsee.	
	Deedaheree.	Badh.	Biralsa.	
	Rusacoolpore.	Bulwa Kheree.	Boodha Khara.	
	Azeespore.	Pilkhenee.	Paotee.	
	Kusyara.	Churthawul Puttee Chuk Danda.	Peepulsan.	
	Kuchholee.	Dudheroo Kulan.	Tanda.	
	Goonyajoodee.	Ditto, Khoord.	Churthawal Puttee.	
	Loháree.	Deh Chund.	Jeetabunsee.	
		Sungulpore.	Ditto Puttee Chowdhran.	
		Sikundurpoor.	Ditto Puttee Rajbeebie.	
		Alumgeerpore.	Ditto Puttee Rutta.	
		Aleepore.	Ditto Puttee Ulmoon.	
		Kyampore.	Ditto Puttee Moorda.	
		Kullyana.	Chowkra.	
		Kullurpore.	Chumao.	
		Kotesara.	Khoosrapore.	
		Gyana Muzra.	Doodlee.	
		Muhmoodpore sanda. Sukur.	Bonee Hurjipore.	
		Muthra.	Syedpoorah Kalan.	
		Mohib Allipore.	Kussowlee.	
		Mungunpore.	Koolaheree.	
		Syud Nugla.	Gheesookhera.	
		Hybutpore.	Nirdhuna.	
		Hurnakee.	Nuglaraeen.	
			Nyamoo.	
Total. ...	11	27	28	66

S. M. MARTIN,
Collector.

A.

Statement showing the effects of alienation by sales in execution of decrees of Court, or by private transfer, during the currency of the past Settlement in the Tehsildar of Mozuffernuggur.

Name of Pergunnah.	Number of villages.	Area in acres.	Jumma.	Private Transfers.				Transfers by order of Court.				Total.				Exempt from Transfers.			Remarks.				
				Whole villages.	Portions.	Acres.	Jumma.	Value.	Whole villages.	Portions.	Acres.	Jumma.	Value.	Whole villages.	Portions.	Acres.							
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	
CHURRAWUL.	66	57,335	65,100 1 0	Rs. a. p.	327	5,199	8,422 6 4	Rs. a. p.	1	72	5,104	7,438 13 9	Rs. a. p.	22,132 10 9	1	399	10,303	15,861 4 1	Rs. a. p.	9=	2,412=	45,098	1,934 acres confiscated on account of rebellion.
	...	100	...	...	...	9	...	...	...	...	9	...	...	...	...	...	18	...	...	...	...	79	Three parts allowed for the above 1,934 acres confiscated on account of rebellion.

This lower line shows the percentage of transfers.

S. N. MARTIN,
Collector.

Supplement to the Statement showing the effects of alienation by sale in execution of Decrees of Court, or by private Transfer during the Currency of the past settlement in the Tehsils of Moosuffernuggur.

Pergannah.	Private Transfers.		Caste of Transferees.	Private Transfers.		By order of Court.		Caste of Transferees.	By order of Court.		Exempt from Transfers.		Remarks.
	Whole village.	Portions.		Whole village.	Portions.	Whole village.	Portions.		Whole village.	Portions.	Whole village.	Portions.	
Syud,	Acres. 70=1,475	Syud, ... Murrul, Tuggas, Mahajan, Khuttree, Pahau,	...	Acres. 10= 118 32= 229 8= 84 25= 988 5= 151 1= 5	...	Acres. 16= 3,333	Buhorah, Syud, ... Khuttree, Mahajan, Brahman,	...	Acres. 1=751 ... ... ... ... ...	...	Acres. 3=1,902	...
Total, Tuggas,	...	70=1,475 53=1,164	Tuggas, Mahajan, Jat, ... Syud, ... Hujjam (Barber), Sheikh, Brahmin,	...	...	...	...	Tuggas, Mahajan, Jat, ... Sheikh,	...	...	...	...	...
Total, Jat,	53=1,164 18= 330	Buhorah, Mahajan,	...	...	...	...	Buhorah, Mahajan,	...	...	...	...	...
Total, Rajpoot,	...	18= 330 79=1,845	Rajpoot, Mahajan, Brahmin, Bhat, ... Sanees,	...	...	...	...	Buhorah, Rajpoot, Mahajan, Bhat, ...	...	...	...	...	...
Total, Brahmin, Mirasees, Sanees, ... Jogee Musaulman, ... Goldsmith,	...	79=1,845 1= 26 1= 9 4= 286 2= 64	Tuggas, Brahmin, Brahmin, Mahajan,	...	...	...	...	Sheikh, ... Brahmin, Brahmin,	...	...	...	...	...
GRAND TOTAL,	...	227= 5,199		...	227= 5,199	...	72= 4,353		...	72= 4,353	...	...	1,984 Acres con- fiscated to Govt. on account of rebellion.

S. N. MARTIN,

Collector.

Profile due to Canal.

3	4	5	6	7	8	11	12
Under canal irrigation.	Former ag- gregated Jun- ma of these villages.	New Ju		Portion of increase attributable exclu- sively to influence of canal.	Number of villages injuriously affected by canal.	ion of de- tributa- the influ- the canal.	Net gain to the revenue of the pergunnah from the influence of the canal.
Rs.	Rs.	Rs.		Rs.			Rs.
4,865	17,831	18,1	...	1,850	...	...	1,850

Note.—In estimating the amount of irrigation and profits due to the canal care has been taken to deduct the irrigation from wells thrown into disuse by the canal; thus in this pergunnah 23 wells are out of work, for each well 22 acres of annual irrigation has been allowed; they have been deducted from each kind of soil in the proposition in which it was found that each kind was irrigated by wells throughout the pergunnah. The difference between the irrigated and unirrigated rates of the remainder gives the total of column 7.

S. N. MARTIN, Collector.

Statement of descriptions of soil, irrigated and unirrigated areas.

TOTAL MALDOOZANES AREA.													
Name of Pergunnah.	Total cultivated areas in acres.										Land not assessable.		Remarks.
	Meerum.	Rootee.	Dakur.	Bhoor.	Total of irrigated land.		Total of un-irrigated land.	Total of land recently thrown out of cultivation.	Total of cultivable land.	Waste.	Bent-tree.		
					By canals, &c.	By wells.							
Churhawul,	10,330 irrigated by wells 5,319 by other means 717, by canal 2147, unirrigated 2,347.	26,949 irrigated by wells 2,264, by other means, 1,079, by canal, 2,107 unirrigated 20,899.	2,921 irrigated by wells, 181 by other means, 133 by canal, 876 unirrigated 1,931.	4,249 irrigated by wells, 64 by other means 61 by canal, 35 unirrigated, 4,099.	4,865	10,306 by wells 8,318 by other means 1,990	29,176	2,284	5,213	6,659	439	92 square miles, 297 per square mile.	

S. N. MARTIN, Collector.

Comparative Statement of Cultivators with and without right of Occupancy and of Cultivating Proprietors.

Name of Pergunnah.	Year.	Cultivators having right of occupancy.	Amount of land held by them in acres.	Average of cultivation in acres.	Tenants-at-will.	Amount of land cultivated by them in acres.	Average of cultivation in acres.	Cultivating proprietors.	Land cultivated by them in acres.	Average of cultivation in acres.	Remarks.
Churthawul, ...	1,840	896	6,909	A. R. P. 7 2 34	3,623	14,892	A. R. P. 4 0 17½	1,734	18,390	A. R. P. 10 2 17	The same facts are found here as in the other pergunnahs, the numbers of hereditary cultivators have increased, but their holdings have diminished. Tenants-at-will, however, have diminished. Cultivating proprietors have increased by 312, but their holdings are nearly stationary. This is peculiar.
Decrease, ...	1,860	2,014	11,518	5 2 35	3,554	11,210	3 0 25	2,046	21,631	10 2 11	
Increase, ...	...	...	...	1 3 39	69	3,682	0 3 32½	...	...	0 0 6
		1,118	4,609	...	...	...	...	312	3,231	...

S. N. MARTIN, Collector.

Statement of Villages paying rents in money and kind.

Name of Pergunnah.	Total number of Villages (mehals.)	Total number of whole Villages in which rents in money have been fixed instead of that in kind.	Whole Villages in which money rents previously prevailed.	Villages in which only rent in kind prevails.	Cultivators paying rent in kind.	Cultivators paying rent in money.	Remarks.
Churthawul, ...	66	...	3 143 Cultivators Kuchholee. Duderree, Khoord, Akhlour.	63 23 Villages in which only rent in kind prevails. 40 Villages in which both sorts of rent prevail.	3,949	1,476	

S. N. MARTIN, Collector.

Statement of Pukka Masonry Wells used for Irrigation.

Name of Pergunnah.	Masonry wells at the last Settlement.	Masonry wells at the present Settlement.	Wells that are out of Repair.	Remarks.
Churthawul, ...	252	253	54	The 54 wells entered in Column 4, are besides the wells entered in Column 3, therefore 56 wells have been built since the last Settlement.

S. N. MARTIN, Collector.

Statement of various kinds of Crops grown at the time of measurement.

Name of Pergunnah.	Cultivated Area in Acres.	Kharreef.																							Rabee.										
		Sugar-cane.	Cotton.	Churree.	Dhan.	Chohera moonjee.	Jowar.	Corud.	Mote.	Barja.	Til.	Gowara.	Vegetable.	Mundwa.	Mukkee.	Indigo.	Toriya.	Tobacco.	Moong.	Sunee or hemp.	Kodo and Shamaikh.	Kungnee.	Nukka.	Ajwan.	Tupakee.	Lobyra.	Wheat.	Barley.	Gram.	Wheat and Barley.	Wheat and Gram.	Musoor.	Chenah.	Mutur.	Hurhur.
Churthawl, ...	44,349	2,038	1,968	5,111	994	322	1,059	6,227	2,896	813	3	308	216	315	992	...	226	16	31	33	553	13	28	1	82	8	18,931	543	363	134	100	15	2	21	5
	100	4½	4½	11½	2½	½	2½	14	6½	2	...	½	½	½	2½	...	½	...	...	...	1½	...	...	...	½	...	42½	1½	½	½	½	...	...	...	...

S. N. MARTIN, Collector.

Statement showing the Tenures on which the Mehals of Zillah Mozuffernuggur are held.

Pergunnah.	Zemindaree.	Putteedaree.	Bhyachara.	Total.
KYRANAH.	1. Punjeet.	1. Boodoopoor.	1. Akberpoor Sunhetee.	
	2. Jullalpoor.	2. Beebeepoor Huttia.	2. Oonchá Gáon.	
	3. Jundheree.	3. Puhár Muzra,	3. Airtee.	
	4. Churhao.	4. Teeturwara.	4. Burálá.	
	5. Chakkandelá.	5. Jugunpoor.	5. Burnávee.	
	6. Chuk k h e r e e Kufshdoz, oorí Teeturwára.	6. Chuk Aleepoor, oorí Teeturwána.	6. Bussara.	
	7. Do., oorí Ky- rána.	7. Do. oorí Kyrána.	7. Bhoora Puttee Mussul- mánán.	
	8. Ghazeepoor.	8. Hyderpoor.	8. Bhoora Puttee Hindooán.	
	9. Kishorepoor.	9. Seepat.	9. Beenra.	
	10. Mamoar.	10. Aleepoor.	10. Paotee Kulán.	
	11. Mullikpoor.	11. Kookurheree.	11. Putepur.	
		12. Koondlá.	12. Dubheree Khoord.	
		13. Mohummudpoor Ráeen.	13. Rámra.	
		14. Muvee.	14. Rána Musrá.	
			15. Eesápoor Khoorgán.	
			16. Kundelá.	
			17. Kheree Kufshdoz.	
			18. Kheree Boocha.	
			19. Kyrána Turuf Khoord.	
			20. Ditto Turuf Durmyán.	
			21. Ditto Turuf Sádho.	
			22. Ditto Turuf Kásim.	
			23. Ditto Turuf Kanoon- goyán.	
			24. Ditto Mehal Mozbetta.	
			25. Gundráon.	
			26. Gogowán.	
			27. Laloopoor.	
			28. Mokundpoor.	
			29. Mundawur.	
			30. Nuglá Ráeen.	
			31. Hingoo Kheree Mehal, 6½ Biswas.	
			32. Ditto Mehal, 13½ Biswas.	
Total, ...	11	14	32	57 Mehals.

S. N. MARTIN,

Collector.

A.

Statement showing the effects of Alienation by sale in execution of Decrees of Court, or private Transfer during the currency of the past Settlement in the Tehseelee of Shamlae.

1.	2.	3.	4.	5.	6.	7.	8.	9.	10	11.	12.	13.	14.	15	16.	17.	18.	19.	20.	21.	22.	23.
Name of Pergunnah.	Number of villages.	Area in Acres.	Jumma.	Whole villages.	Portions.	Acres.	Jumma.	Value.	Whole villages.	Portions.	Acres.	Jumma.	Value.	Whole villages.	Portions.	Acres.	Jumma.	Value.	Whole villages.	Portions.	Acres.	Remarks.
KYNABH.	57	57,617	Rs. a. p. 47,826 8 3	...	357 = 3,833 acres.	3,833	4,638 5 6	Rs. a. p. 34,723 2 0	...	132	2,297	2,526 15 5	Rs. a. p. 15,906 6 6	...	489	6,230	7,165 4 11	50,629 8 6	18 = 8,714 acres.	3,857 = 42,471 acres.	51,192	195 acres confiscated on account of rebellion.
	...	100	...	...	...	6½	...	...	...	...	4½	...	...	...	...	10½	...	...	...	...	89 ¼ for confiscated 195 acres.	The transfers in this Pergunnah 10½ per cent have been very moderate, owing partly perhaps to the fact that transfers among a Goojar community are not popular Goojurs will take transfers from Goojurs, but I doubt if other castes would like to lay out their money in purchasing the shares of Goojurs.

S. N. MARTIN,
Collector.

Profits due to Canal.

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
Pergunnah.	Number of Villages irrigated by Canal.	Area under Canal irrigation.	Former aggregate Jumma of these villages.	New Jumma.	Increase.	Portion of increase attributable exclusively to influence of Canal.	Number of villages injuriously affected by Canal.	Former Jumma.	New Jumma.	Portion of decrease attributable to the influence of the Canal.	Net gain to the revenue of the Pergunnah from the influence of Canal.
Kyranah	30	Rs. a. p. 7,853 0 0	Rs. a. p. 31,060 4 3	Rs. 35,730	Rs. a. p. 4,669 11 9	Rs. a. p. 3,647 0 0	...	...	...	...	Rs. 3,647

Where well irrigation exists 22 acres have been allowed for each well, this is deducted from the whole amount of irrigation ; upon the balance the difference between unirrigated and irrigated rates gives the amount of profit due to the Canal.

Statement of descriptions of Soil, irrigated and unirrigated Areas, &c.

Name of Pergunnah.	TOTAL MALGOOZAREE AREA.										LAND NOT ASSESS- ABLE.		Remarks.
	Total Cultivated Area in Acres.										Total of land recently thrown out of cultiva- tion.	Total of recently culturable land.	
	Meeun.	Boslee.	Dakur.	Bhoor.	Total of irrigated land		Total of unirri- gated land.						
					By Canals.	By Wells.							
Kyranah, ...	3,658 irrigated by wells, 2,903, by canals, 692, by other means, 40, unirrigated, 23.	25,190 irrigated by well, 11,863, canal, 6,211, other means, 420, unirrigated, 6,697.	2,775 irrigated by well, 1,115, canal, 912, other means, 163, unirrigated, 585.	2,019 irrigated by well, 571, canal, 38, other means, 8, unirrigated 1,402.	7,853	17,092 by wells, 16,451, by other means, 631.	8,707	1,724	14,782	6,301	1,096		
	Total Cultivation, = 33,642 " Malgoosaree, = 50,148 " Area of village, 57,545 acres.												

S. N. MARTIN,
Collector.

Comparative Statement of Cultivators with and without right of occupancy and of cultivating Proprietors.

Name of Pergunnah.	Year.	Cultivators having right of occupancy.	Amount of land held by them in acres.	Average of cultivation in acres.	Tenants-at-will.	Amount of land cultivated by them in acres.	Average of cultivation in acres.	Cultivating proprietors.	Land cultivated by them in acres.	Average of cultivation in acres.	Remarks.
Kyranah, ...	1840, 1860,	17 527 Deduct Balance. 1 village 527	170 2,246 Deduct Balance. 1 village, 2,246	A. r. p. 10 0 0 4 1 2	2,614 2,388 Deduct Balance. 1 village 388 6 Acres.	14,945 13,220 Deduct Balance. 1 village 13,141 79	A. r. p. 5 2 35 5 2 3	1,321 1,484 Deduct Balance. 1 village 1,483 1 acre	15,360 18,176 Deduct balance. 1 village. 66 18,110	A. r. p. 11 2 23 12 0 34	The village to be deducted is that of which the former Settlement records are not forthcoming. It is inserted for uniformity, but is not available for comparison, and has not been included in the average.
Decrease, Increase,	... ...	... 510	... 2,076	5 2 38	232 ...	1,804 ...	0 0 32 ... ...	... 162	... 2,750	... 0 2 12	

Statement of Villages paying rents in money and kind.

Name of Pergunnah.	Total number of villages (mehals.)	Total number of whole villages in which rents in money have been fixed instead of that in kind.	Whole villages in which money rents previously prevailed.	Villages in which rent in kind prevails.	Cultivators paying rent in kind.	Cultivators paying rent in money.	Remarks.
Kyranah, ...	57	...	9	45 10 Villages in which only rent in kind prevails. 35. Do., in which both sorts of rent prevail.	1,338	1,418	Of 57 entered in Col. 2,—2 villages are cultivated by the proprietors themselves and one Kookerheres is now lying uncultivated.

S. N. MARTIN,
Collector.

Statement of Pucka Masonry wells used for irrigation.

Name of Pergunnah.	Masonry Wells at the last Settlement.	Masonry Wells at the present Settlement.	Wells that are out of repair.	Remarks.
Kyranah,	884	794	123
				The 123 wells are in addition to those entered in Column 3.

Statement showing the various kinds of Crops grown at the time of Measurement.

Name of Pergunnah.	Cultivated Area in Acres.	KURREE.																				RUBBER.												
		Sugar-cane.	Cotton.	Churree.	Dran.	Chuhora Moonjee.	Jowar.	Oorud.	Mote.	Bajra.	Til.	Gowra.	Vegetable.	Mundwa.	Makkee.	Indigo.	Torya.	Tobacco.	Moong.	Hemp.	Kodo Shammah.	Kungnee.	Lobia.	Wheat.	Barley.	Gram.	Wheat and barley.	Wheat and gram.	Musoor.	Kurur.	Mustard.	Linsed.	Pas or Mutter.	Sont.	Kullowjee.
KRYANAH.	33,642	303	1,806	2,384	208	870	3,755	1,148	796	655	6,324	81	749	1,362	380	67	2	26	159	13	71	40	13,502	613	3,644	78	118	208	5	5	6	27	6	6
	100	1	54	7	4	24	11	32	24	2	...	1	4	2	4	1	4	...	4	...	...	4	...	404	2	11	4	4	...	...	...	...	...	...

The lower line shows the percentage of each crop.

S. N. MARTIN,
Magistrate and Collector.

Statement showing effect of Alienation by sales in execution of Decrees of Court or by private Transfer during the currency of the past Settlement in the Tehsees of Moosuffernagur.

Name of Per- gunnah.	Number of Vil- lages.	Area in Acres.	Private Transfers.					Transfers by order of Court.					Total.					Exempt from Trans- fers.			Remark.				
			Whole vil- lages.	Portions.	Acres.	Juma.	Value.	Whole vil- lages.	Portions.	Acres.	Juma.	Value.	Whole vil- lages.	Portions.	Acres.	Juma.	Value.	Whole vil- lages.	Portions.	Acres.					
Gordhunpore,	71	43,363	19,501	3=	82=	5,087	Rs. a. p.	Rs. a. p.	Rs. a. p.	...	37=	1,555	1,073	3 6	6,970	3=	5,364	6,842	2,550	7 3	11,751	33=	327=	34,919	208 Shares hol- ders represent- ing 109 shares have made transfers.
				1,278	3,809		whole villages	whole villages	whole		1,555	473	0	0	526	1,378			villages 478	whole	11,751	17,766	17,153		
				acres.	acres.		Portions.	Portions.	Portions.		acres.				526	acres.			Portions.	Portions.	11,256				
							1,004	3 9	4,256										2,077	7 3					

B.—Supplement to the Statement showing the effects of Alienation by sale in execution of Decrees of Court or by private Transfers during the currency of the past Settlement in the Tehsees of Moosuffernagur.

Pergunnah.	Private Transfers.			Caste of Trans-ferree.	Private Transfers.			Caste of Trans-ferree.	Private Transfers.			Caste of Trans-ferree.	By order of Court.			Caste of Trans-ferree.	Exempt from Transfer.			Remarks.
	Whole vil-lages.	Portions.	acres		Whole vil-lages.	Portions.	acres.		Whole vil-lages.	Portions.	acres.		Whole vil-lages.	Portions.	acres.					
Goojur, ...	1= 519	60=2,855	...	Goojur,	20=1,612	...	Goojur,	24=1,261	...	Goojur,	12= 361	27=15,542	248=14,533	The largest amount of transfers have been among the Goojurs, the predominant class in this pergunnah.			
...	Brahmin, ...	...	10= 290	...	...	...	...	...	...	...	...	...	...
...	Mahajun, ...	...	8= 138	...	Mahajun, ...	...	...	...	Mahajun, ...	...	8= 562	...	...		
...	Bahorah, ...	...	1= 22	...	Bahorah, ...	...	...	...	Bahorah, ...	...	4= 338	...	...		
...	Tugga, ...	...	12= 318	...	...	...	...	...	...	...	...	...	...
...	Goehain, ...	...	1= 30	...	...	...	...	...	...	...	...	...	...
...	Sheikh, ...	...	4= 249	...	...	...	...	...	...	...	...	...	...
...	Jat, ...	...	1= 109	...	...	...	...	...	...	...	...	...	...
...	Sheikh Syud, ...	...	2= 74	...	...	...	...	...	...	...	...	...	...
...	Khutree, ...	...	1= 13	...	...	...	...	...	...	...	...	...	...
Total, ...	1= 519	60=2,855	...	...	...	60=2,855	...	...	...	24=1,261	...	...	...	24=1,261	27=15,542	248=14,533
Sanee, ...	1= 261	6= 142	...	Sheikh Syud, ...	...	1= 261	...	Sheikh Syud, ...	...	...	...	...	...	...	...	...
...	Bahora, ...	...	...	...	...	...	...	...	...	...	...	...	...
...	Tugga, ...	...	2= 30	...	...	...	...	...	...	...	...	...	...
...	Goojur, ...	...	2= 13	...	...	...	...	...	...	...	...	...	...
...	Sheikh Syud, ...	...	1= 76	...	...	...	...	...	...	...	...	...	15= 305			
Total, ...	1= 261	6= 142	...	...	...	6= 142	...	...	...	...	...	...	...	...	...	15= 305
Chohan,	5= 339	...	Mahajun, ...	...	4= 289	...	...	...	...	...	...	...	...	...	4= 302	
...	1= 50	...	...	...	...	...	...	...	...	...	...
Total,	5= 339	...	...	...	5= 339	...	...	...	...	...	...	...	...	...	4= 302	
Sheikh,	Marhul, ...	...	...	...	...
Jat,	1= 140	...	1= 140				
Khutree,				
Tugga, ...	1= 498	...	...	Mahajun, ...	...	1= 498	...	...	...	...	...	...	...	...	3= 1,324	2= 187
Brahmin,				
Kamboh,	4= 73	...	Brahmin, ...	...	4= 73	...	...	...	...	...	...	...	...	1= 406	3= 53	
Rangurh,	24= 865				
Chumar,	2= 494	...				
Afghan,	12= 62				
Mahajun,	4= 265	...	Sheikh Syud, ...	...	4= 265	...	...	...	...	...	...	...	...	...	14= 268	
Byragee,	1= 50	...	Goojur, ...	...	1= 50	...	...	...	...	...	...	...	...	...	...
...	...	2= 85	...	Tugga, ...	...	2= 85	...	...	...	...	...	...	...	...	...	26= 427
Total, ...	3= 1,278	82=3,809	...	...	...	89=3,809	...	...	...	...	...	...	...	...	33=17,766	327=17,153

*Statement showing the villages with areas affected by percolation and transferred to the Canal Depar
No. 129, dated 9th March, 1864. Commis*

Number.	Name of Pargunnah.	Names of Villages.	Names of Proprietors.	AREA IN ACRES BY FORMER MEASUREMENT.					AREA IN ACRES BY PRESENT MEASUREMENT.					Former demand.
				Cultivated.	Culturable.	Barren.	Swamp.	Total.	Cultivated.	Culturable.	Barren.	Swamp.	Total.	
1	Gondhapoor.	Nuroo Musra,...	Zuboor Ali and others, ...	134	54	122	...	300	...	...	...	312	312	73
2		Buhloulpoor,...	Futta, Dhurm Singh and others, ...	71	86	85	...	242	...	...	...	252	252	62
3		Nanoopoor, ...	Ditto. ...	94	325	94	...	513	...	...	...	500	500	64
4		Dudoopoor, ...	Shara, Kunwur, ...	137	323	49	...	509	53	162	34	246	497	123
5		Dhumut Puttee Goojran, ...	Ishar Hoosein, Zuboor Ali, ...	76	49	15	...	140	10	...	10	117	137	61
6		Dhumut Puttee Sanyan, ...	Ditto. ...	149	66	50	...	265	77	56	10	190	273	174
7		Sikunderpoor, ...	Zuboor Ali, ...	271	190	89	...	479	169	44	30	251	494	328
8		Bhudowlee, ...	Omrao Singh and Keres, ...	83	237	199	...	519	90	40	61	356	547	230
9		Mahpoor, ...	Jhoonka, Sahit and others, ...	122	106	114	...	344	14	100	...	209	354	64
10		Bykoontpoor,...	Nowab Ahmad Ali Khan, ...	89	121	217	...	427	...	...	...	425	425	74
11		Hooseinpoor,...	Koora, ...	89	74	243	...	406	8	...	12	510	530	12
12		Khairkee, ...	Sheo Singh, ...	208	344	73	...	640	130	4	73	400	437	312
13		Marukpoor, ...	Sewuk Ram, ...	165	83	231	...	519	...	...	46	465	511	74
14		Sueepoor, ...	Bahree, ...	217	67	61	...	345	20	...	30	300	340	300
15		Bolakeepoor,...	Sheo Singh and Kiaben Singh	111	83	184	...	358	127	80	125	125	357	100
16		Bhudowla, ...	Nowul, ...	151	90	32	...	253	131	9	39	65	244	210
17		Kurunpoor, ...	Laekram, Pema and others, ...	656	98	150	...	899	589	189	75	120	903	984
18		Chunrawala, ...	Nand Lal, ...	82	57	360	...	499	69	248	182	105	604	79
19		Muthana, ...	Phoswa, ...	220	262	90	...	572	361	23	88	88	557	466
20		Mohumadpoor, ...	Nuthan, ...	73	186	37	...	286	111	84	59	34	292	300
21		Ibraheempoor, ...	Koora, and Zuboor Ali, ...	371	167	108	...	646	355	123	27	162	664	500
22		Jheenwurhalree, ...	Suroop and Durba, ...	186	32	66	...	275	80	95	18	100	285	254
23		Panchlee, ...	Futta, and Sahuboo, ...	86	42	263	...	391	47	167	78	126	404	109
24		Oodyawalee, ...	Buksheeram, ...	42	149	368	...	559	10	7	90	410	517	60
25		Aekkee, ...	Sahub Singh and Omrao Kunwur, ...	139	284	285	...	701	47	75	95	438	565	190
26		Budheswala, ...	Ditto. ...	250	299	614	...	1,163	102	154	104	864	1,227	215
27		Bunsleewala, ...	Ditto. ...	52	66	399	...	517	58	185	152	50	445	48
28		Rochhaikkee, ...	Hoshyar and Sahya, ...	348	124	217	...	691	381	129	69	130	709	652
29		Dhurmoopoor, ...	Mohroo, Sowaia, and Umer Singh, ...	345	404	78	...	827	374	339	117	35	855	500
		Total, ...	...	...	...	...	...	...	...	...	...	...	...	...
30	Shokurbahrae.	Kanewalee, ...	Bukshee Ram, ...	388	373	8	...	...	...	...	...	...	...	...
31		Ulmawala, ...	Ditto. ...	426	721	107	...	...	...	...	...	...	...	...
32		Zindawala, ...	Ditto. ...	98	20	522	...	...	...	...	...	...	...	...
33		Jogawala, ...	Bodh Singh and Goomana, ...	247	848	1,391	...	...	...	...	...	...	...	...
34		Shadra, ...	Buksheeram, ...	97	100	8	...	...	...	...	...	...	...	...
35		Furreedpoor,...	Ditto. ...	314	63	3	...	...	...	...	...	...	...	...
		Total, ...	...	...	...	...	...	...	...	...	...	...	...	...
36	Godhna Godhnce	Jhuburpoor, ...	Nujaff Ali and Furzund Ali, ...	444	391	328	...	...	...	...	...	...	...	...
37		Sahmtnwala,...	Buksheeram, ...	77	89	38	...	...	...	...	...	...	...	...
38		Mandonwala, ..	Jowahur Sing (Farmer)...	5	145	290	...	...	...	...	...	...	...	...
39		Nasaroolapoor, ...	Jowahur, ...	238	24	98	...	...	...	...	...	...	...	...
40		Basera, ...	Mohroo, Surjeet, Munsookh and Rughbeer Sing, ...	4,231	1,292	470	...	...	...	...	...	...	...	...
41		Godhna Godhnce	Khoorshaid Ali Khan, ...	1,201	430	698	...	...	...	...	...	...	...	...
		ahjehanpoor, }	Bhoora and others, ...	345	92	557	...	...	...	...	...	...	...	...
		kraspoor, }	Raja Rughbeer Singh, ...	251	90	294	...	...	...	...	...	...	...	...
		oocha, ...	Koora, ...	54	122	252	...	...	...	...	...	...	...	...
		alawala, ...	Ditto. ...	74	144	489	...	...	...	...	...	...	...	...
		shalee, ...	Kunwur and Jehangeer,...	1,050	193	528	...	...	...	...	...	...	...	...
		oghlapoor,...	Lachmun, ...	659	123	416	...	...	...	...	...	...	...	...
		oornuggur, ...	Sahub Sing, ...	325	266	572	...	...	...	...	...	...	...	...
		herpoor, ...	Dya Chund, ...	58	149	122	...	...	...	...	...	...	...	...
		humsnugger, ...	Oodum, ...	320	195	420	...	...	...	...	...	...	...	...
		handun, ...	...	...	...	...	...	...	...	...	...	...	...	...
		Total, ...	...	...	...	...	...	...	...	...	...	...	...	...
		GRAND TOTAL	...	...	...	...	...	...	...	...	...	...	...	...

N. B.—The jummas Marked thus * have not been

† Plus, 12,493—Total, 21,206.

ment, under orders of Government, N.-W. P., conveyed through Sudder Board of Revenue, N.-W. P., sioners docket No. 85, dated 17th March, 1864.

REVISED DEMAND INCLUDING CESSSES.						Total of cesses.	Malikana @ Rs. 15 per cent. on former demand.	Grand total on all accounts.	Remarks.
Revised jumma.	Road fund.	School fund.	District dawk.	Putwarees wages.	Chowkedaree.				
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
10 0 1 9	0 1 9	0 0 6	0 0 6	0 0 6	...	0 13 6	10 15 0	21 12 6	Although the Ameens have put down a quantity of land as culturable, it is really not so: an impure soda called "Reh" has appeared in many places, rendering cultivation of plants quite impossible, not even wild grasses grow: where once this poison appears on surface then comes the next stage, percolation and swamp; "reh" is almost invariably the precursor of the latter.
12 0 2 0	0 2 0	0 0 6	0 0 6	0 11 0	...	0 15 6	9 5 0	22 4 6	
12 0 2 0	0 2 0	0 0 6	0 0 6	0 11 0	...	0 15 6	9 10 0	22 9 6	
10 0 1 9	0 1 9	0 0 6	0 0 6	0 0 6	1 0 0	1 13 6	18 7 0	30 4 6	
15 0 2 6	0 2 6	0 0 9	0 0 9	0 14 6	1 8 0	2 12 3	9 2 0	26 14 3	
30 0 5 0	0 5 0	0 1 3	0 1 3	1 13 6	2 0 0	4 8 9	26 2 0	60 10 9	
50 0 8 0	0 8 0	0 2 0	0 2 0	3 0 0	4 0 0	8 2 0	54 4 0	108 6 0	
15 0 2 6	0 2 6	0 0 6	0 0 6	0 14 6	1 0 0	2 4 0	33 0 0	50 4 0	
12 0 2 0	0 2 0	0 0 6	0 0 6	0 11 0	...	0 15 6	8 2 0	21 1 6	
12 0 2 0	0 2 0	0 0 6	0 0 6	0 11 0	...	1 0 0	11 2 0	24 2 0	
11 0 2 0	0 2 0	0 0 6	0 0 6	0 10 6	1 0 0	1 15 0	1 13 0	14 13 0	Up to the present moment swamp has been on the increase, possibly the canal officers may yet check its spreading further, but the experiment is doubtful.
40 0 6 9	0 6 9	0 1 9	0 1 9	2 7 0	1 0 0	4 6 3	46 15 0	91 5 3	
10 0 1 9	0 1 9	0 0 6	0 0 6	0 9 6	...	0 13 6	11 2 0	21 15 6	
50 0 8 0	0 8 0	0 2 0	0 2 0	3 0 0	2 0 0	6 2 0	45 0 0	101 2 0	
60 0 9 9	0 9 9	0 2 4	0 2 4	3 9 6	...	4 15 6	15 0 0	79 15 6	
100 1 0 0	1 0 0	0 4 0	0 4 0	6 0 0	8 0 0	16 4 0	36 0 0	152 4 0	
900 9 0 0	9 0 0	2 4 0	2 4 0	54 0 0	23 0 0	97 4 0	147 10 0	1,144 14 0	
20 0 4 0	0 4 0	0 1 0	0 1 0	1 3 6	2 8 0	4 4 6	11 14 0	36 2 6	
400 4 0 0	4 0 0	1 0 0	1 0 0	24 0 0	11 0 0	44 0 0	62 12 0	513 12 0	
50 0 8 0	0 8 0	0 2 0	0 2 0	3 0 0	2 0 0	6 2 0	30 0 0	86 2 0	
300 3 0 0	3 0 0	0 12 0	0 12 0	18 0 0	18 0 0	42 12 0	78 0 0	417 12 0	Numbers 36, 39, 40, 41, 42, 43, 46, 47, 50, in Pergunnah Poor still retain the lands on the high ground (banger), and the revised assessment has been made on these lands only. The khadir lands of these villages have been handed over to the Canal Department, but this does not affect the revised jummas and cesses which still remain on the rent roll (tawzee) as before, and have therefore been omitted from this statement, which is intended to show the transfers to the Canal Department.
50 0 8 0	0 8 0	0 2 0	0 2 0	3 0 0	3 0 0	7 2 0	38 2 0	95 4 0	
20 0 3 6	0 3 6	0 1 0	0 1 0	1 3 6	...	1 11 6	15 0 0	36 11 6	
10 0 1 9	0 1 9	0 0 6	0 0 6	0 5 6	0 8 0	1 1 6	7 8 0	18 9 6	
100 1 0 0	1 0 0	0 4 0	0 4 0	6 0 0	7 0 0	15 4 0	32 2 0	143 12 0	
100 1 0 0	1 0 0	0 4 0	0 4 0	6 0 0	7 0 0	15 4 0	32 4 0	147 8 0	
40 0 7 0	0 7 0	0 1 9	0 1 9	2 7 0	...	3 6 9	6 7 0	49 13 9	
668 6 15 0	6 15 0	1 11 9	1 11 9	40 1 0	15 0 0	70 10 9	97 19 0	836 7 9	
581 6 0 0	6 0 0	1 8 0	1 8 0	34 14 0	24 0 0	72 6 0	75 0 0	728 6 0	
3,688 37 9 0	37 9 0	9 6 9	9 6 9	221 1 0	134 8 0	440 1 9	976 13 0	5,104 14 9	
30 0 5 0	0 5 0	0 1 3	0 1 3	1 12 6	11 0 0	13 7 9	50 14 0	94 5 9	The Canal officers will collect the revised jummas with extra cesses and malikana and transmit the same to the Collector; these will be.
50 0 8 0	0 8 0	0 2 0	0 2 0	3 0 0	7 0 0	11 2 0	55 13 0	116 15 0	
30 0 5 0	0 5 0	0 1 3	0 1 3	1 12 6	...	2 7 9	12 2 0	44 9 9	
50 0 8 0	0 8 0	0 2 0	0 2 0	3 0 0	9 0 0	13 2 0	32 6 0	95 8 0	
20 0 4 0	0 4 0	0 1 0	0 1 0	1 4 0	5 0 0	6 13 0	16 7 0	49 4 0	
30 0 5 0	0 5 0	0 1 3	0 1 3	1 12 6	...	2 7 9	13 1 0	45 8 9	
310 2 3 0	2 3 0	0 8 9	0 8 9	12 9 6	32 0 0	49 8 3	179 11 0	339 3 3	
*300 ...	...	...	...	...	...	...	...	...
2 0 1 0	0 1 0	0 0 3	0 0 3	0 3 0	...	0 5 3	10 1 0	12 6 3	
40 0 7 0	0 7 0	0 1 9	0 1 9	3 13 0	...	4 12 9	17 6 0	62 2 9	
*80	<p>Rs. a. p.</p> <p>Revenue, 2,978 0 0</p> <p>Malikana, 1,247 1 0</p> <p>Road Fund, 40 12 0</p> <p>School Fund, 40 12 0</p> <p>Dist Dawk, 10 5 6</p> <p>Chowkedaree, 166 8 0</p> <p>Total, Rs. 5,483-4-6</p> <p>I have agreed with Major Forbes, R. E., that he should pay the Putwarees wages; this will give him a hold over these officials.</p>
*8,000 ...	...	...	...	...	...	...	...	...
*1,300 ...	...	...	...	...	...	...	...	...
*200 ...	...	...	...	...	...	...	...	...
*200 ...	...	...	...	...	...	...	...	...
15 0 3 0	0 3 0	0 0 9	0 0 9	0 14 0	...	1 4 9	7 8 0	23 12 9	
9 0 2 0	0 2 0	0 0 6	0 0 6	0 8 0	...	0 12 6	9 12 0	19 8 6	
*1,400 ...	...	...	...	...	...	...	...	...
*450 ...	...	...	...	...	...	...	...	...
6 0 1 0	0 1 0	0 0 3	0 0 3	0 5 0	...	0 7 3	38 6 0	44 13 3	
8 0 2 0	0 2 0	0 0 6	0 0 6	0 11 0	...	0 15 6	7 8 0	16 7 6	
...	
80 1 0 0	1 0 0	0 4 0	0 4 0	6 6 0	...	8 10 0	90 9 0	179 3 0	
†3,978 40 12 0	40 12 0	10 3 6	10 3 6	240 0 6	166 8 0	498 4 0	1,247 1 0	5,723 5 0	

transferred to the Canal Department.

† Plus 1,273 2—Total 1,6708.

S. N. MARTIN,
Collector.

Statement of descriptions of soil, irrigated and unirrigated Areas.

Name of Pergunnah.	TOT			NOT ASSASSABLE.
	TOTAL CULTIVATE			
	Messun.	Roslee.	Dakur.	Rent-free.
Gordhumpore, ...	3,315 irrigated by wells, 48 by other means, 187 unirrigated 2,980.	3,369 irrigated by wells, 3 by other means, 80 unirrigated 2,286.	3,433 irrigated, 21 unirrigated, 3,412.	...
				16,118

Comparative Statement of Cultivators with and without right of occupancy and of cultivating Proprietors, Pergunnah Gordhumpore.

Year.	Cultivators having right of occupancy.	Amount of land held by them in acres.	Average of cultivation. Acres.	Tenants-at-will.	Amount of land cultivated by them. Acres.	Average of cultivation. Acres.	Cultivating Proprietors.	Land cultivated by these Proprietors. Acres.	Average of cultivation. Acres.
1840, ...	123	1,338	Ac. r. p. 6 3 25	1,075	4,886	Ac. r. p. 4 2 7	603	8,957	Ac. r. p. 14 3 16
1862, ...	331	1,424	4 1 8	1,466	5,482	3 2 38	623	9,213	14 3 6
Decrease, ...	...	...	2 2 27	...	...	0 3 9	...	...	0 0 10
Increase, ...	139	86	...	391	596	...	20	255	...

S. N. MARTIN,
Collector.

Statement of villages paying rents in money and in kind.

Name of Pergunnah.	Total number of villages.	Total number of whole villages in which rent in money has been fixed instead of that in kind.	Whole villages in which money rent was previously prevailing.	Villages in which rent in kind prevails.	Cultivators paying rent in kind.	Cultivators paying rent in money.	Remarks.
Gordhunpoor, ...	69	...	...	63 37 Villages in which only rent in kind prevails. 25 Villages in which both sorts of rent prevail.	1,604	193	Three Villages are entirely cultivated by the proprietors and four are entirely uncultivated ; making a total of 69.

Statement of Pukka masonry wells used for Irrigation.

Name of Pergunnah.	Pukka wells at the last Settlement.	Masonry wells at the present Settlement.	Wells that are out of repair.
Gordhunpoor, ...	3	5	...

S. N. MARTIN,
Collector.

Statement showing the Tenures on which the Mehals of Zillah Moosuffernugger are held.

Pergunnah.	Zemindaree.	Putteedaree.	Bhyachara.	Total.
BEDOLEE.	Bhāoomuzra. Seengra. Shahpoor. Sudurpoor. Khorsuma. Khairae Zonnardar. Nusseerpoor. Teesung.	Ushrufpoor. Oodpoor. Ol'ahenee. Beenamuzra. Bhutteemuzra. Jhijhowla. Rutound. Kairtoo. Goojurpoor. Yaheepoor.	Undhairira. Odree. Bulamuzra. Bulhaira. Bedolee. Bhuree. Bhogeemuzra. Toda. Jullalpoor. Chousanah. Buree Bichleal. Ditto Luhoryal. Chuttaila. Khwajpoora. Dillaora. Dubhairae. Donkpoora. Dhakwalla. Sukhowtee. Soobhree. Seetulgurhee. Azeepoor. Uleepoora. Futtehpoor. Kubeerpoor. Kumalpoor. Kulree. Kulamuzra. Kothulpoor. Lalloopoora. Myankusbah. Moondeegurhee. Moostafabad. Munsoora. Munglorah. Naeenugla. Yoosufpoor. Jellalpoor.	
Total,	8	10	36	54

A. COLVIN,

Settlement Officer.

S. N. MARTIN,

Collector.

A.

Statement showing the effects of alienation by sales in execution of Decrees of Court, or by Private Transfers, during the currency of the past Settlement in the Tehseel of Shamlee.

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.
Name of Pergunnah.	Number of Villages.	Area in Acres.	Jumma.	Whole Villages.	Portions.	Acres.	Jumma.	Value.	Whole Villages.	Portions.	Acres.	Jumma.	Value.	Whole Villages.	Portions.	Acres.	Jumma.	Value.	Whole Villages.	Portions.	Acres.	Remarks.
BADOLIE.	80	59,791	42,299 3 9	3 = 1,594 acres.	197 = 5,553 acres.	7,147	6,323 8 7	8,721 5 0	1 = 3,553 acres.	82 = 2,579 acres.	6,132	4,947 8 9	6,077 3 0	4 = 5,147 acres.	279 = 8,132 acres.	13,279	10,371 1 4	14,798 8 0	13	3,334	45,574	The "portions" in columns 6 and 11 are equivalent to transfers. Against the 197 transfers in column 6 were 319 shareholders, and against the 88 in column 11 were 104, making a total of 423, which added to the 3,334 in column 21 gives the total shareholders in the pergunnah. The number 13 in column 20 represents those villages in which there have been no transfers at all.
							Whole villages 821 0 1,048 acres, Portions 5,502 8 7 paying a jumma of Rs. 547 0 0, and for 74 portions, or 2,154 acres, Rs. 7,951 5 0, paying a jumma of Rs. 2,492 3 1. The price of the 3rd whole village entered in column 15 is unascertainable. So also the price of 123 shares, or 3,399 acres.															

* The five villages transferred to Kurnal are included in this and the Statement B.

A. COLVIN,
Settlement Officer.

S. N. MARTIN,
Collector.

B.

Supplement to the Statement showing the effects of alienation by sale in execution of decrees of Court, or by private transfer, during the currency of the past Settlement in the Tehseelee of Shamlee.

Caste of Transferees.	PRIVATE TRANSFERS.		Caste of Transferees.	PRIVATE TRANSFERS.		Caste of Transferees.	BY ORDER OF COURT.		Caste of Transferees.	BY ORDER OF COURT.		EXEMPT FROM TRANSFERS.	
	Whole Villages.	Portions.		Whole Villages.	Portions.		Whole Villages.	Portions.		Whole Villages.	Portions.	Whole Villages.	Portions.
Jat,	...	Acres. 8= 236	Mahajun, Jat,	...	Acres. 2= 40 6= 196	Mahajun, Jat,	...	Acres. 6= 28	...	...	3= 17 3= 11	Acres. 2= 1,645	254=4,748
Total,	...	8= 236	Total,	...	8= 236	Total,	...	6= 28	...	...	6= 28	2= 1,645	254=4,742
Peerzadah,	...	7= 301	Mahajun, Kayeth, Peerzadah, Sheikhzadah, Syud,	...	1= 32 1= 39 2= 56 2= 162 1= 180	Mahajun, Kayeth, Peerzadah, Sheikhzadah, Syud,	...	...	...	...	...	...	78= 504
Total,	...	7= 401	Total,	...	7= 401	Total,	...	...	...	...	...	...	78= 404
Syud,	...	82=2,220	Syud, Peerzadah, Murrul, Mahajun, Rajpoot, Kayeth,	...	68=1,552 1= 11 1= 275 15= 365 1= 6 1= 11	Syud, Peerzadah, Murrul, Mahajun,	...	1=3,553 57=2,188	...	1=3,553 5= 76 13= 940 39=1,172	...	...	1,577=9,079
Total,	...	82=2,220	Total,	...	82=2,220	Total,	...	57=2,188	...	1=3,553	57=2,188	...	1,577=9,079
Mahajun,	...	17= 674	Syud, Mahajun, Murrul, Kayeth, Jat,	...	7= 345 7= 179 1= 50 1= 20 1= 80	Syud, Mahajun, Murrul, Kayeth, Jat,	...	...	...	...	...	...	57=1,978
Total,	...	17= 674	Total,	...	17= 674	Total,	...	...	...	...	...	...	57=1,978

Goojur,	...	3=1,048	29= 901	Syud, Goojur, Mahajun, Sheikhzadah,	...	3=1,048	29= 901	26= 930 1= 114 1= 29 1= 25	...	5= 53	Mahajun,	...	...	5= 59	4= 3,848	698= 7,808
Total,	...	2=1,048	29= 901	Total,	...	2=1,048	29= 901	...	...	5= 53	Total,	...	...	5= 53	4= 3,848	698= 7,808
Rajpoot,	...	1= 546	34= 726	Mahajun, Rajpoot, Syud, Sheikhzadah, Murrul,	...	...	16= 319 9= 105 7= 226 3= 76 1= 546	...	...	7= 163	Mahajun, Syud,	...	...	5= 107 2= 56	4= 4,925	428= 6,124
Total,	...	1= 546	34= 726	Total,	...	1= 546	34= 726	...	...	7= 163	Total,	...	...	7= 163	4= 4,925	428= 6,124
Afghan, Kayeth,	...	...	1= 18 5= 96	Afghan, Murrul, Mahajun, Kayeth,	...	...	1= 18 2= 68 1= 2 2= 26	...	...	1= 18 3= 57	Afghan, Murrul, Mahajun, Syud,	...	...	1= 18 1= 6 1= 7 1= 44	1= 553	86= 1,120 44= 394
Total,	...	...	5= 96	Total,	...	...	5= 96	...	...	3= 57	Total,	...	...	3= 57	...	44= 394
Brahmin, Bor, Bhat, Tugga, Kullal,	...	...	1= 14 2= 71 ... 3= 112 8= 84	Syud, Bor, ... Sheikhzadah, Kullal, Sheikhzadah,	...	...	1= 14 2= 71 ... 3= 112 4= 68 4= 16	...	...	2= 33 1= 40	Mahajun, Murrul, ... ...	...	...	2= 33 1= 40 ... ...	... ... ... ...	42= 672 16= 757 12= 194
Total,	...	...	8= 84	Total,	...	...	8= 84	...	...	...	Total,	...	...	...	...	12= 194
Sheikhzadah, Mahajun and Peer- zadah holding equal shares, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1= 232	42= 183
GRAND TOTAL, ...	...	3=1,594	197=5,553	GRAND TOTAL, ...	...	3=1,594	197=5,553	1=3,553	...	82=2,579	GRAND TOTAL, ...	...	1=3,553	82=2,579	18=12,119	3,334=33,455

A. COLVIN,
Settlement Officer.S. N. MARTIN,
Collector.

No. 1.—Statement of Descriptions of Soil, Irrigated and Unirrigated Areas.

TOTAL MALGOOZAREE AREA.										LAND NOT ASSES- ABLE.		Area in square miles= 87. Population per square mile=219.	
Name of Pergunnah.	TOTAL CULTIVATED AREA IN ACRES.							Total of land recently thrown out of cul- tivation.	Total of culturable land.	Waste.	Rent-free.		
	Mesun.	Boslee.	Dakur.	Bhoor.	Total of irrigated land.		Total of unir- rigated land.						
					By Canals, &c.	By Wells.							
Bedowlee, ...	1,947	14,413	2,449	1,735	...	14,068	6,476	5,559	14,987	2,101	3,033		
	Irrigated.	Irrigated.	Irrigated.	Irrigated.									
	1,902	9,950	1,601	615									
	Unirrigated.	Unirrigated.	Unirrigated.	Unirrigated.									
	45	4,463	848	1,120									
Mtafee villages, ...	18	265	1	8	FORMER SETTLEMENT=			3,523	15,685	8,252	3,978		
	Wells.	Wells.	Wells.	Wells.									
	18	184	1	4									
	...	Other means.	...	Other means.									
	...	11	...	3									
	...	Unirrigated.	...	Unirrigated.									
	...	70	...	1									
										

No. 2.—Comparative Statement of Cultivators with and without Right of Occupancy, and of Cultivating Proprietors.

Name of Pergunnah.	Year.	Cultivators having right of occupancy.	Amount of land held by them in acres.	Average of cultivation in acres.	Tenants-at-Will.	Amount of land cultivated by them in acres.	Average of cultivation.	Cultivating proprietors.	Land cultivated by them in acres.	Average of cultivation.	Remarks.
Bedowlee,	1840,	302	2,325	A. R. P. 6 1 28	1,276	7,448	A. R. P. 5 3 14	713	11,284	A. R. P. 15 3 12	The cultivated area is 2,061 less than at the last Settlement, but the labourers living on it are 318 more.
	1860,	703	4,100	5 3 28	1,231	6,366	5 0 27	1,028	10,078	9 3 18	
		Deduct 4 villages.	Deduct 4 villages.		Deduct 4 villages.	Deduct 4 villages.		Deduct 4 villages.	Deduct 4 villages.		
		47	214		171	887		73	677		
		Balance 656	Balance 3,886		Balance 1,060	Balance 5,479		Balance 963	Balance 9,411		
Decrease,	...	...	...	0 2 0	216	1,969	0 2 27	...	1,883	5 3 34	
Increase,...	...	294	1,561	...	...	...	...	240	...	...

The villages to be "deducted" as above are those of which the papers of the last Settlement are not forthcoming.

They have been included in this Statement to make it complete; but for purposes of comparison have been distinguished from the villages of which the records are forthcoming.

A. COLVIN,
Settlement Officer.

No. 3.—Statement of Villages paying Rents in Money and in Kind.

Name of Pergunnah.	Total number of Villages.	Total number of whole villages in which rent in money has been fixed instead of that in kind.	Whole villages in which money-rent was previously prevailing.	Villages in which rent in kind prevails.	Cultivators paying rent in kind.	Cultivators paying rent in money.	Remarks.
Bedowlee, ..	55	1	0	52— 28 villages, in which only rent in kind prevails, 24 villages, in which both sorts of rent prevail.	1,455	406	In Statement No. 2 the total number of cultivators in columns 3 and 6 is 1,984. In this Statement the total of columns 6 and 7 is 1861. The odd 73 are in the village mentioned in column 3 of this Statement.

S. N. MARTIN,

Collector.

A. COLVIN,

Settlement Officer.

No. 4.—Statement of Pukka Masonry Wells used for Irrigation.

Name of Pergunnah.	Pukka wells at the last Settlement.	Masonry wells at the present Settlement.	Wells that are out of repair.	Remarks.
Bedowlee,	874	857	105	

S. N. MARTIN,

Collector.

A. COLVIN,

Settlement Officer.

No. 5.—Statement of various kinds of Crops grown at the time of measurement.

Name of Pergunnah.	Cultivated area in acres.	KHURUMB.														RIVER.								REMARKS.										
		Sugar-cane.	Sugar-cane for the next year.	Cotton.	Chutree.	Dhan (Rice).	Chuhore Moonjee (Rice).	Jowar.	Oord.	Mote.	Bajra.	Til.	Gowarah.	Vegetables.	Mundwah.	Indian corn (mukkee).	Indigo.	Toria.	Tobacco.	Moong.	Hemp.	Shamakh.	Kungnee.		Wheat.	Barley.	Gram.	Wheat and Barley.	Wheat and Gram.	Musoor.	Kurur.	Mustard.	Teessee (flax).	
Bedowlee.	20,544	673	19	539	2,332	44	264	623	129	303	316	5	7	162	560	889	2	432	157	1	2	...	107	11,430	1,049	314	57	...	98	410	1
	100	3½	...	2½	11½	4	1½	3	4	1½	1½	...	...	1	2½	4½	...	2	3	...	...	4	56½	5	1½	3	...	4	...	...	...	...
It will be observed that more than half the cultivated area is wheat. But the measurements were made in the year of drought when wheat it could be grown, and the rain crops were very scarce. The season in fact was an abnormal one, and the Khureef crops were very scantily sown.																																		

A. COLVIN,
Settlement Officer.

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SETTLEMENT REPORT AND STATEMENTS

OF THE

DISTRICT OF MOZUFFERNUGGER,

FOR THE YEAR 1866.

1. ACCORDING to the returns now prepared at this revision of Settlement, the total area of the district is 1,033,468 acres.

Unassessable,	{ Barren Waste,	...	...	...	152,575
	{ Rent-free,	...	...	...	32,789
Assessable,	{ Culturable,	...	...	...	197,931
	{ Cultivated,	...	...	...	650,173

2. At the Settlement under Regulation IX. of 1833, completed in 1840, the area was—

Total,	...	...	...	...	691,706
Barren Waste,	...	...	...	...	113,461
Rent-free,	...	...	...	...	17,911
Culturable,	...	...	...	...	167,957
Cultivated,	...	...	...	...	392,377

3. The following minor sub-divisions* were in 1842 transferred to this district:—

	FROM MEERUT.				Area.
Kyranah,	55,210 Acres.
Kandhla,	64,323 „
Boodhana,	50,492 „
Bhooma Sumbulhera,	81,274 „
Shikarpore,	63,799 „
FROM SAHARUNPORE.					
Thana Bhowan,	57,414 „
					<hr/> 372,512

making the area

691,706
372,512
<hr/> 1,064,218

* The details of these are not given here, as they would swell this Report unnecessarily.

Since then, sundry minor transfers have occurred by diluvion and otherwise of estates from and to adjoining districts. *

4. In the memo. on the statistics of the North-Western-Provinces, printed in 1848, the area of this district is stated to be—

Total,	...	...	...	...	1,034,899
Barren Waste,	...	...	...	...	160,227
Rent-free,	...	...	...	...	41,473
Culturable,	...	...	...	...	213,129
Cultivated,	...	...	...	...	620,070

5. In the Census papers of 1853, the following are the entries :—

Total,	...	...	...	...	1,053,641
Barren Waste,	...	...	...	...	153,717
Rent-Free,	...	...	...	...	76,287
Culturable,	...	...	...	...	153,173
Cultivated,	...	...	...	...	670,468

6. The earliest return with which the statistics of the revised Settlement can be compared is that of 1848. The following is the result of the comparison :—

TOTAL AREA.					
In 1848,	...	...	...	...	1,034,899
Now,	...	...	...	...	1,033,468
					<hr/>
Less now,	...	...	...	...	1,431
BARREN WASTE.					
In 1848,	...	...	...	...	160,227
Now,	...	...	...	...	152,575
					<hr/>
Less now,	...	...	...	...	7,652
RENT-FREE.					
In 1848,	...	...	...	...	41,473
Now,	...	...	...	...	32,789
					<hr/>
Less now,	...	...	...	...	8,684
CULTURABLE.					
In 1848,	...	...	...	...	213,129
Now,	...	...	...	...	197,931
					<hr/>
Less now,	...	...	...	...	15,198
CULTIVATED. *					
Now,	...	...	...	...	650,173
In 1848,	...	...	...	...	620,070
					<hr/>
More now,	...	...	...	...	30,103

* Compared with 1853 there has been a decrease in the cultivated area of—
20,295
670,468
650,173

20,295
This is accounted for further on; and it must be remembered that a large area of cultivated ground is temporarily left untilld on the eve of a Settlement.

7. These statistics show that there has been an increase to the assessable area of rent-free resumed 8,684 acres; excess of cultivation, 30,103, since 1848.

8. But the earliest returns were incomplete and incorrect as regards rent-free holdings. At first all these were not surveyed. To get the actual difference of assessable area now, as compared with the last Settlement, the corrected returns of rent-free holdings must be taken, viz.—

* No additions have been made by new grants, therefore this amount was really held rent-free in former Settlements.

Those of the Census of 1853.

	Acres.			
The amount then was,	76,287*
It is now,	32,789
				<hr/>
Less now,	43,498

To this must be added difference of cultivated area in 1865, compared with 1848, 30,103

The actual increase is, 73,601
from which enhancement of revenue may be expected. Appendix A. shows the difference in each column between the memo. of 1848 and the statement of area of the revised Settlement in each minor sub-division.

9 The number of estates is 1,122.

10. The population at the different periods when census has been taken was as follows :—

	<i>Agricultural.</i>	<i>Non-Agricultural.</i>	<i>Total.</i>
According to printed memo. of 1848, ...	233,749	303,845	537,594
By Census of January 1st, 1853, ...	325,189	347,672	672,861
By revised Settlement Returns, 1864-65,	242,724	348,973	591,697
By last Census in February, 1866, ...	280,872	401,340	682,212

11. The returns of 1848 and of the revised Settlement may be held to show the permanent residents of the district; those of 1853 and 1866 include every individual, temporary sojourner, and traveller. The first two were prepared by the village accountants; the last two are the results of most careful general census.

12. The return of 1866 confirms the fact shown in the revised Settlement Returns, that when the revision was in progress there was a marked diminution of the agricultural population, as compared with the number in 1853.

13. This may be ascribed to the disturbances in 1857 and the famine in 1860-61.

14. In the first, many were killed in fights among the people themselves, many absconded and have settled in other parts of the country, and an inconsiderable number fell in engagements with the troops.

15. But the decrease principally occurred owing to the famine. In spite of the exertions made to save life and support the distressed population, there is no doubt that a large number died of destitution and consequent sickness; many removed to districts not affected by the drought; and though, perhaps, most of these have returned, some remained in their new homes.

16. The non-agricultural population was less affected, because in the anarchy the large communities were not so open to attack as small villages, and could be helped by the authorities; and in the famine, measures for relief could be better organized, and were therefore more successful in towns than they could be in scattered hamlets.

17. The amount of land revenue by the Settlement in 1840 * was Rs. 1,119,839; the assessment was then estimated to be $66\frac{2}{3}$ per cent., or two-thirds of the assets.

18. The revised demand is based on the principle of the Government share being 50 per cent., or one-half of the assets.

19. Had the former Settlement been made on this principle, the figures, instead of 1,119,839, would have been 839,879.

20. Comparing these last with the amount of the demand now fixed, which will be 1,140,644, including 10,094, the assessment on rent-free tenures which lapse on the death of the present incumbents, the increase of revenue secured by the late revision is 300,765.

21. On the actual demand of the past Settlement the increase is 20,805.

22. Considering that the last Settlement was made on the principle of taking two-thirds of the assets, and on the revised assessment only half assets are taken, there should have been (all other elements remaining undisturbed) a decrease of about 180,000.

23. This subject will be fully entered into in considering the propriety or otherwise of the assessment in detail; but in this place it may be noticed that, in addition to the 73,601 acres mentioned above, from which an enhancement of revenue might be expected, 56,832 acres have been irrigated by the Ganges Canal, which was only in contemplation in 1840; and there has been an increase of irrigation from the Eastern Jumna Canal to the extent of at least 10,000 acres. The fact that there has been a slight increase instead of a great decrease of Land Revenue, on the adoption of a new principle of assessment, is thus generally accounted for.

24. The reason why there has not been so large an increase in this as will be secured in other districts is, that in some minor sub-divisions there has been no progress, but a falling off.

25. For instance, in Bidowlee, owing to the cultivators being principally of the Goojur tribe,—great thieves, but very bad tillers of the soil,—there has been a considerable decrease of cultivation, which has rendered a corresponding reduction of demand necessary. Again, in Goredhunpore, owing to a change in the course of the Soline, a large number of flourishing estates have become swamps; a large area in the valley of the Ganges has not only not improved but deteriorated.

26. Next to the extension of cultivation and irrigation, the comparative amount of produce obtained from the soil, according to the estimates of the last and of the revised Settlement, the average prices then and now, and the rates of rent paid by the cultivators to the landlord in 1840 and 1865, come under consideration.

27. There is no appreciable difference between the rates of rent, whether in cash or in kind, quoted by Mr. Thornton as ruling in his time, and those now ascertained by Mr. Martin to prevail.

28. A comparison of the elaborate table appended to Mr. Thornton's Report, printed in 1841, with the returns now prepared by the Settlement Officers, shows that there has been little if any improvement in the amount of produce—very little change in the system of tillage. The proportion then and now of the crops remains much the same.

The only observable difference is the great spread of sugar-cane. In 1841 the average percentage was 4, it is now 6. In only one sub-division it was 10, in one 6, in four 5, in the rest, 4 per cent., or less. Now in one sub-division it is 11 per cent., in three 8, in seven from 6 to 7½; in the other sub-divisions much as in 1841. The extent of this valuable crop is increasing annually.

29. Mr. Thornton's elaborate enquiries showed that the amount of produce accord-

* Appraisalment is an estimate made by experienced men accustomed to judge by examination of the standing crop what the yield in each particular field is.

ing to appraisements* made in the presence of European Officers was considerably higher than that entered in the papers of the landlords and village accountants. Mr. Martin's experiments show a similar difference. An attempt has been made in the course of the Settlement now in progress to ascertain what the produce actually is by cutting the crop off a certain area, and weighing it after it has been thrashed and winnowed. The result of this test was an enormous excess of produce above all previous estimates. This last test cannot be taken as the basis of a general average; the operation had to be superintended by European Officers. The Officers available were few. The area examined was therefore so small that no general conclusion could be drawn. Though the instructions were, that average fields and average crops should be selected, it is quite possible that the amount of produce was above the average. Again, it was of course necessary that the whole operation should be completed in one day; the weight of the grain may therefore have been very much more than it would have been had the usual length of time between cutting and weighing intervened, during which the grain loses weight considerably by drying. But this and all similar experiments tend to prove that the

In Mr. Colvin's report on the sub-division of Kundah, there are some interesting remarks on the perceptible difference between the condition of estates held by proprietary communities and those owned by individual landlords and cultivated by tenants at will.

yield of the land is considerably greater than it is represented to be; and these tests and all produce returns lead to the conclusion that, as a general rule, the cultivator gets from 60 to 75 per cent. of the produce—from 25 to 40 per cent. being left to be divided between the landlord and Government. In the case of careful cultivators and cultivating brotherhoods, their share would be still larger.*

30. Messrs. Colvin and Grant were of opinion that there has been no rise in prices since 1841. Mr. Martin differs from them, and thinks that an allowance of 25 per cent. should be made in all calculations based on the value of grain. The following table shows the prices recorded by Mr. Thornton as the average of 20 years preceding his Settlement, and in juxtaposition the price-currents of the Shamlee for 24, and Mozuffernugger markets for 15, years immediately preceding the late revision. Mr. Thornton mentions that allowance has been made for the difference between the prices of the cultivators and the grain-dealers of the bazaars receive. He does not mention what allowance was made, and leaves it to be conjectured that the prices given are those received by the cultivators. The ordinary difference between the price which the cultivators received and what the purchasers from them demand on bringing the grain into the market is estimated to be 10 per cent., which has been deducted from the prices given by Mr. Martin.

Table shewing Average of the Prices current in Mr. Thornton's time and now.

		Average of 20 years given by Mr. Thornton.	Average of past 24 years in Shamlee Market.	Average of the last 15 years in Mozuf- fernugger Market.	Remarks.
Wheat,	...	36½	26	27½	
Gram,	...	42½	28	31½	
Barley,	...	54½	38	44	
Rice,	...	51½	38	38	
Fine Rice,	...	42	32	7½*	*In this entry the very finest rice is evidently meant— not the kind quoted in the other columns.
Moong,	...	31	28	26	
Jowar,	...	44½	32	30½	
Rajra,	...	43	31½	33	
Mote,	...	40½	31	Not given.	

This table shows that Mr. Martin is decidedly right in believing that there had been a great rise in prices, and that Messrs. Colvin and Grant were in error in this one matter. Mr. Thornton expressly mentions that the weight adopted by him was the seer which weighed 90 Rs., the standard of which was from 171·198, to 173 grains troy. The weight in the latest price-current is 88 Government rupees, or 92 Furruckabad oblique rupees, to the seer.

An idea that the revised assessment of this district has been very moderate—indeed, inadequately light—has spread among the people and officers of other districts, and may have reached higher authorities. In the Boolundshuhur District the universal answer to enquiries as to whether the assessment there was fair is, “that the demand is moderate and just, and therefore unobjectionable; but not so light as in Mozuffernugger.”

This has led to the preparation of the table, Appendix B., in which the rates of assessment in the assessable area of three districts*—*viz.*, Mozuffernugger, Saharunpore, and Boolundshuhur—are shown.

The first five entries in that table are minor sub-divisions of the Mozuffernugger District.

In other words the rate of assessment is higher in those sub-divisions than in any part of either of the two other districts.

The Saharunpore entries are according to Mr. Vans Agnew's assessment. The revision will give higher rates.

31. The last three entries,—*i. e.*, the lowest rates of assessment—are also in sub-divisions of Mozuffernugger District; but these are Bidowlee and Goredhunpore mentioned above, and Bhooma Sumbulhera, a tract intersected with sand-hills, and partly consisting of waste lands in the valley of the Ganges.

32. The other sub-divisions of Mozuffernugger take place in the table in juxtaposition with what may be generally called corresponding tracts in the other districts.

33. The correctness of this idea of under-assessment, therefore, is not confirmed by this general comparison.

On the contrary, it is evident that the idea, though it may have been based on some isolated facts, is generally incorrect.

34. The rate of the incidence of the new assessment on the assessable area in the highest assessed sub-divisions of Mozuffernugger is Rs. 2-4-5½ per acre, while the highest rate in the other districts (i. e., in Boolundshuhur) is Rs. 1-9-8½.* Again, then, it may be generally asserted that there is no reason to suppose that the interests of Government have been sacrificed. The more these Settlement proceedings are criticized in detail, the greater is the proof of this which is forthcoming.

* This difference is accounted for by the fact that in Boolundshuhur generally, and in the sub-divisions particularly referred to, sugar-cane is not grown, while in the Shamlee sub-division 8½ per cent. of the area is under cane.

35. Appendix C. shows the former assessment, what the actual decrease of demand should be in each sub-division in consequence of the reduction of the share of the assets now taken by Government, the amount of Revenue now demanded, and the extent to which the results of the new assessment differ from what should have been the result had the demand simply been reduced by 16 per cent.

* Already mentioned above.

Appendix A.* shows the state of the details of the area of each sub-division in 1848 and 1865.

Appendix D., the comparison of the area irrigated then and now.

36. In the sub-division of Bidowlee the reduction made is greater than what is due to the new principle of assessment. It has already been stated that there has been a considerable decrease of cultivation.

37. In Goredhunpore the difference between the actual results and the reduction of 16 per cent. is very small.

38. In Jhunjhana the reduction should have been 9,480 : it has been 6,358. The reason why a further reduction of 3,122 was not granted must be sought.

The statistics show a large decrease of cultivation ; but Mr. Colvin reports that lands were lying uncultivated in the year in which the measurements were made, owing to the famine ; and that the cultivated area, including recently abandoned, is only a little less than that of the last Settlement. There has been an increase of irrigation from the Eastern Jumna Canal of 2,305 acres. There were at the last Settlement 782 wells : there are now 808.

Here are, therefore, general indications that the statistics convey an erroneous impression of the actual status of the sub-division, and that there may be found in the increase of irrigation sufficient reason for stopping the reduction a little short of the 16 per cent. figures. Mr. Colvin's remarks on the No. II. Statements leave no doubt that the assessment is a fair one.

39. The next sub-division is Bhooma Sumbhulhera. Apparently the change from the two-thirds to the half asset principle required a further reduction of Rs. 6,034 ; but the statistics show an increase of cultivation to the extent of 9,990 acres, and the Ganges Canal has commenced to afford an entirely new source of irrigation. This fully accounts for the results.

40. The circumstances of Churthawul are nearly similar : the further reduction should apparently be Rs. 6,327 ; but there has been an increase of cultivation of 4,763 acres, and 1,235 acres, formerly rent-free, have been by resumption added to the assessable area—making a total of close upon 6,000 acres from which enhancement of Revenue may be expected. The area formerly irrigated by the canal is not ascertainable ; only a small portion of the sub-division has the benefit of canal irrigation, to the extent now of 2,611 acres. There has been most probably here, as everywhere, owing

to excellent management, an extension of irrigation from the Eastern Jumna Canal; and altogether there is no reason to doubt that the revised assessment is proper.

41. In Boodhana, where the 16 per cent. principle would point to a further reduction of Rs. 6,729, there has been an increase of cultivation of 1,616, and of resumed rent-free land assessable of 169; total, 1,785.

Here general statistics would indicate that there should have been further reduction; but a reference to the No. II. Statements must dispel the idea. In half the estates of the sub-divisions the village papers give a rental fully double the assessed demand. In almost all the other estates this is very nearly the case, or so nearly that there can be no doubt as to the moderation of the demand. It is universally acknowledged that, though these village accounts are not trustworthy, it is because an attempt is made to conceal the assets by understating the outturn of the harvests. They never show a larger crop or greater rental than has really been secured. In the few cases in which there is no mention in the remarks in the No. II. Statement of the village rent-roll, there is palpable proof of the lightness of the assessment.

Mr. Keene's proceedings were carefully scrutinized by Mr. Martin, after the acquisition of considerable experience. In one case only was a reduction of Mr. Keene's demand thought necessary.

42. In the sub-division of Bugra, though there has been an increase of cultivation of 2,604 acres, and an increase of assessable area of 551 from resumption of rent-free holdings,—total, 3,155 acres,—to account for increase of assessment, and in a portion of the tract improved canal irrigation, and a reduction of demand to the extent of Rs. 4,671,—still, seeing that at 16 per cent. the reduction should have been 9,000 more, and the tract is for the greater part unirrigated, a doubt is engendered as to the possibility of the demand being really at half asset rates. But an examination of the No. II. Statements must dispel this. There are 75 estates altogether: in 25 the village papers show that the rental is fully or nearly double the demand;—in five the cash rates fixed shows the same;—in 20 estates the former Revenue has been so far reduced as to leave no doubt that the limit of half assets has been reached;—in all the remaining estates the remarks show that the demand is moderate. In only one estate does the assessment appear to be too high, viz., Kazee Khaira, No. 42. In this estate the cash rent-roll has been fixed under the operation of Act XIV. of 1863 at Rs. 1,577-10-6; the revised demand is Rs. 970-0-0.

Here the margin left to the proprietor is too small. Mr. Martin anticipates a rise in rent which will give the landlord the full half share. It is doubtful whether a demand should be based on such anticipation.

43. The statistics show that in the sub-division of Thana Bhowan there has been a great apparent decrease of cultivation compared with the returns of the last Settlement; but this is owing to a large area lying uncultivated in the year of measurement—the temporary result of the famine. There has been a considerable increase of canal irrigation (above 3,000 acres more are irrigated now than in 1840); but this is the only source from which increase of Revenue could be expected; and it would appear that there ought to have been a much larger reduction of demand.

But in 21 estates the demand has been reduced; in 28 all the calculations show that assessment must be fairly at about half asset rates; in 6 the village papers show that it is so clearly; in 9 cases there may be a doubt whether the assessment may not be above the mark—these are Nos. 1, 13, 15, 14, 21, 28, 30, 50, 59. No. 30 should hardly be included, as there is a large culturable area—554 acres. But Mr. Colvin is so confident that he has reduced the demand throughout to half asset rates that, even where his remarks in No. II Statements leave a doubt, it may be assumed that he had good grounds for maintaining the old demand.

44. In the sub-division of Kyrana there has been an increase of cultivation of 4,526 acres, and 3,130 acres of resumed rent-free land has

* Mr. Colvin makes out the canal irrigation area in 1862-63 to be 10,078 acres; but I have taken the canal returns of 1863-64 throughout.

been added to the assessable area. Canal irrigation has been extended—there being now 4,175 acres,* against 818 at the last Settlement. There is therefore no reason to suppose that the

slightly enhanced assessment does not leave the landlords their full 50 per cent. Mr. Colvin asserts that the former demand was very light, and that he has kept his down below the proper standard, partly because the land is mostly owned by Goojur brotherhoods.

45. In the sub-divisions of Khatowlee, Jansuth, Poor, Chapar, Bookuhera, and Mozuffernugger—in which, instead of any reduction, there has been an increase of demand—the Ganges Canal water-courses have been spread through the land since the last Settlement, giving irrigation where there was none before, and causing an increase of cultivation as below :—

Sub-Division.			Increase of cultivation, including area of resumed rent-free land.		Increase of Irrigation.	
				Acres.		Acres.
Khatowlee,	...	...	1,365		12,217	
Jansuth,	...	...	7,875	"	15,596	"
Poor,	...	...	3,531	"	13,287	"
Bookuhera,	...	...	7,415	"	9,995	"
Mozuffernugger,	...	...	12,299	"	11,622	"

It is clear, therefore, that where the increase of demand has been greatest there have been new assets in abundance to meet it.

46. Three sub-divisions remain to be considered—Shikarpore, Shamlee, and Kandla.

47. In the first there has been an increase of cultivation and assessable area altogether of 5,375. There is no record of the irrigation at the end of the last Settlement. The return is now 2,414 acres.

The increase of assessable assets hardly accounts for an increase of demand of Rs. 2,751, when at 16 per cent. the decrease should have been 16,000. But the village papers show that in 36 estates the rent-roll is fully, and in 12 very nearly, double the assessment now fixed; in three estates the reduction granted shows that the half asset limit has been observed; in the remaining cases the different calculations show that the demand is not more than half of the assets. Generally, therefore, the people themselves, by their own papers, acknowledge that the assessment is fair—indeed, moderate.

48. The case of the Shamlee Sub-division is singular. There has been no increase of cultivation, nor of irrigation,* nor of rent-rates, nor

* Mr. Colvin shows an increase of 5,600 acres; but the statement is drawn up from returns of 1863-64.

of prices. According to Mr. Colvin (though in this he is wrong), with this last exception, everything apparently has remained stationary since 1840; but still the Settlement Officers, instead of reducing the demand by Rs. 19,200, lower it only by Rs. 259. The land is for the most part held and tilled by Jat brotherhoods. The village papers of such brotherhoods are never to be trusted, and have not therefore been referred to. But that these Jat brotherhoods secure from the ground very much more than double the Government demand may be shown by one instance. The gross produce in Bhynswal was proved by very careful calculations to have been in the famine year about Rs. 1,00,000—Mr. Martin says Rs. 80,000, and that the net rental in that year must be taken at Rs. 20,000; but the most trustworthy account made it the larger sum, and the estimating of the net rentals, when the proprietors are the cultivators, at one-quarter is hardly correct. Supposing the estate belonged to one individual, who divided the crop with his cultivators at the generally prevalent rate, his share would be nearly half the produce.

The table of prices of grain for 24 years shows that prices were doubled, and with respect to some articles trebled, in the famine year. Allowing that the produce in that

year was one-third above the average, and making allowance also for prices being at three times the ordinary standard, and therefore deducting one-third from Rs. 1,00,000, leaving say Rs. 66,000, * and taking only one-third of that sum, the out-turn of an ordinary year may be safely calculated at Rs. 22,000. The Government demand is about one-third of that. There is no reason to think that this sub-division is over assessed; the only cause for apprehension is partial injury by flooding the soil with flush irrigation, and thereby raising the level of the springs even to the submergence of the surface. If, as has been recommended in a separate Report, No. 471, dated 24th August last, the supply of canal water is turned from such tracts to high-lying soils, urgently requiring irrigation, this sub-division should be a most flourishing one.

49. The greatest difference in any sub-division between the demand as it would be, deducting 16 per cent., and the actual revised demand, is in Kandhla, where it is Rs. 26,650. To set off against this, there is an increase of cultivation and of assessable area from resumption of rent-free land of, altogether, 11,146 acres; and there has been an extension of irrigation, according to Mr. Colvin, at the time of measurement, of above 15,000 acres. The returns of 1863-64 make the increase not so many hundreds.

Mr. Colvin remarks, with reference to his assessment,—“ The Ois-Kursumee vil-
 * The Kursumee is a river. “ lages* were very unequally assessed; the Trans-Kursumee
 † Town of Kandhla. “ mostly very much under-assessed. In the qusbah† Sir H.
 ‡ Those whose rent-free “ Elliott, ever light on ex-maafeedars,‡ had left quite two-thirds
 holdings have been re- “ of the assets in their hands. Some other villages, from causes I
 sumed. “ could not ascertain, had been under-assessed. Much as I
 “ raised the demand, I still left more than half assets in the
 “ hands of the ex-maafeedars; and they accepted the demand without hesitation.”
 And further on he writes,—“ On the whole, it has been the most highly prosperous
 “ pergunnah I have seen.”

The village papers shew in a considerable number of cases that the demand is at the half asset rate. In two cases—Dangror and Futtehpoore Kheree—the people will get more than half the assets. In some cases, where the rents have been fixed under Act XIV. of 1863, this is also the case.

50. From the remarks above, and a careful examination of the No. II. Statements, it must be concluded that two-thirds of the assets were not taken at the last Settlement, and that there is no reason to suppose that more than half assets are taken now. Cases may be selected in which the demand apparently should be raised; and a few may be found in which reduction might seem to be necessary. I have not interfered in the first, because Mr. Martin states that, when the profits do not exceed 150 per cent., Mr. Muir considered the Settlement Officer's assessment should not be revised; but the estates in which alteration might be made have been noticed in remarks in No. III. Statements; and if the Board should now be of opinion that in such cases, and in the few cases where there is an appearance of over-assessment, the demand should be altered, this can be done, in concert with the Collector, in a very short time.

51. There are returns appended to the statements of some sub-divisions of the results of the conversion of rent in kind into cash rent under the operation of Act XIV. of 1863. Some entries in these show a much smaller percentage of profits to the landlord than he is entitled to; these will generally be found to be cases in which the cultivators, under a provision of the past Settlement, were allowed to pay to the landlord only 18 per cent. on the Government demand, in lieu of ordinary rents—an anomaly which has been at this Settlement corrected.

52. In these cases the cash rents now fixed are still below the standard. The proceeding was of course excessively unpalatable to the cultivators; and the consequence of attempting to put them at once on the same footing with ordinary cultivators would have been a general exodus and the ruin of the estates. A middle course was therefore followed, by which the cultivators were brought gradually into their new

position. In all these cases this has been recorded in the proceedings; and when the cultivators have got accustomed to the new burden, the landlords will be entitled to have their rents enhanced to the proper standard. In the meanwhile they are getting 50, or 60, or 70 per cent., instead of 18 per cent., on the Government demand.

53. In the most prominent cases in which the percentage of profits appeared palpably to be too high or too low, further explanation was required from the Collector. Mr. Martin's further remarks will be found appended to the No. III. Statements: they show that he has considered the peculiar circumstances of each estate most carefully, and will enable the Board to judge whether the assessment should stand or be modified.

54. It is impossible to assess every estate so accurately that the shares taken by Government and left to the landlord shall in every case be exactly balanced. Even if such rigid correctness could be attained, there would be no permanency. A liberal expenditure of capital on the part of a landlord, or intelligent and energetic exertion by a brotherhood, might increase the assets, and thereby enhance their share—the Government demand being limited; or mismanagement and dissensions may reduce existing assets, and leave a smaller margin of profit to the proprietors. Mr. Martin has evidently done his best, as far as it is in the assessing officer's power, to guard against undue pressure of the Government demand, even under adverse circumstances, wherever there is danger perceptible; and to secure to the landlord his full share, provided the most ordinary arrangements are made for the proper tillage of the lands. The tacit consent of those concerned, who have made no objections to the Settlement*

* There have been only 17 cases of appeal to the Commissioner regarding the assessment throughout the Settlement of 1,123 estates.

—the universal opinion of the people of neighbouring districts —indicate very satisfactorily that the assessment is moderate. That it should be so is the order of Government, and has been the constant care of the District Officers. At the same time, as sundry Notes in the Nos. II. and III. Statements will show, the revising officers have been also careful to see that a fair share is secured for Government.

55. It is to be hoped that, with still further extension of cultivation, where there is room, a great increase of irrigation by judicious canal management,* improvements in agriculture in every way—by introduction of machinery, of better breeds of cattle, of new and better seed, and the adoption, where applicable, of more scientific treatment of soils and crops—the utilization of all the land available for plantation of trees, &c., &c., the profits of the proprietors may be largely increased, and the burden of taxation which custom has made bearable may be reduced to a rate somewhat less startling to European ideas.

were reduced from the rate of 55 † per cent of the assets to even 25 per cent., this would surely be a most desirable conclusion.

* *Pergunnah Reports.*—i. e., a still further enhancement of the rate of water-rent, which would induce all who can to have recourse to irrigation from wells, and have the canal water for tracts where the construction of wells is difficult and irrigation from them expensive; and the saving of water by the introduction of irrigation by small channels to small compartments, instead of flushing whole fields.

† This is including cesses for maintenance of roads and schools, and interior postal arrangements, and, watch and ward of villages, which are taken over and above the Land Revenue.

56. If, in the course of events, the contribution of the agricultural community to the general Revenue of the country were reduced from the rate of 55 † per cent of the assets to even 25 per cent., this would surely be a most desirable conclusion.

57. The universal recognition of the right of the ruling power, as sole lord of the land, to any share in the produce which tenants could pay, has induced a habit of thought on the subject, which has reconciled the people in former days to a still higher rate of assessment, and makes them feel that in the Settlement now reported the demand of Government is really moderate; but, when considered from another point of view—the limitation of the right to a much lower standard than has ever been adopted or thought of—should not appear objectionable.

58. The British Government has given up the position taken by the ancient Kings, has admitted the old occupiers to be proprietors of the lands, transferring to them all proprietary rights. What was originally the imperial landlord's share is now really in the shape of a tax upon land—the amount which the landlords contribute to meet the national expenditure.

59. If the non-agricultural members of the general community were called upon to pay even 25 per cent. of their income, it would be very soon acknowledged that the tax on land, even at this reduced rate, was sufficiently high.

60. If the whole of the teeming population of India were subjected to a direct taxation, at the rate of Rs. 2 each, which is about the average rate of incidence per head of the assessment in this district,*

* The average really is Rs. 1-14-2.

there would be no necessity for maintaining anything approaching to the old rate of Land Tax; and when considered in this light, the probability of the Government share in the produce of the soil falling eventually far below what has hitherto been held to be its right, would not only be contemplated without apprehension, but would be accepted as a mere measure of justice to those who have long borne a heavy burden. Even if the agricultural community should come eventually, by the application of capital and labor, to retain a larger proportion of the assets than it is now intended they should, and thus cease to pay directly the percentage which is now

† The agricultural community should be exempted from direct taxation.

extracted from them, they would help to swell the growing income from indirect taxation†—the Custom dues on exports and imports, Stamp dues, Excise dues, Salt Tax, &c.—and would thus contribute as much perhaps as could be levied from them at any future Settlement.

61. The introduction of the system long ago adopted in Bengal—the permanent limitation of the assessment—should not be viewed with apprehension, nor as an unwarrantable sacrifice of future Revenue.

62. The margin of culturable area in the whole district of Mozuffernugger is under 20 per cent; what is still left to be brought under cultivation is generally inferior soil. The backward sub-divisions, in which there is a larger proportion, have been excepted, and in these temporary Settlement is proposed. In isolated estates in which the culturable margin is above the average, a fair and moderate addition to the demand, which would be fixed according to present capabilities, has been made in anticipation. When this is not agreed to, temporary Settlement has been proposed; when the enhanced demand is accepted, the objection to limitation ceases.

63. In these Settlements in the North-Western Provinces now in progress, the evils which resulted from the too hasty adoption of the system in Bengal have been avoided. Here there has been a professional survey of the country: the boundaries and areas of all estates have been ascertained, and carefully recorded. Field maps, showing every field, every uncultivated patch, every orchard or garden, every pond or water-course, the village site—in fact, every portion of the estate in full detail,

‡ There are not universally such perfect maps of estates in England.

plotted to scale and admirably executed, have been prepared.‡ In these Index maps every field or plot is numbered. A list of fields, with corresponding numbers, forms part of the record: in this list the number of the field, the details of measurement, the name of the field, the name of the proprietor and cultivator, the area, the rent, are all recorded. Records of right, showing the tenure, share, or position of every proprietor, sub-proprietor and cultivator, have been carefully prepared. Village administration-papers, or bye-laws, noting the customs and rules for village management, present and future, providing for all contingencies connected with transfer of right by sale and purchase; mortgage; the rules regarding right of pre-emption, partition, succession, election of managers—are entered. In short, whereas in Bengal nothing was known, or hardly anything was known beyond the amount of demand which was made permanent, here in the North-West every atom of information which can be required is immediately forthcoming.

64. The political advantages of making the Settlement now concluded permanent can hardly be overrated. Though some ignorant men may not now appreciate the measure, even they will in time, as all the more intelligent do now; and when the mass find themselves gaining year by year larger profits, and that they are better off than they ever were before, or are likely to be under any other government, and know that this prosperity will not be interrupted by their present rulers, but is owing to them,

and probably dependent on the continuance of the rule, they will not be anxious for any change. Ensured, by limitation of demand, of the enjoyment of all the profits that can be secured, they will set to work to improve their estates, and become well-to-do, and therefore loyal, subjects.

65. The effect of the orders ruling that, to entitle a proprietor to claim permanent Settlement, there must be 80 per cent. of the area irrigated, will be to make the Settlement of every estate temporary. In ordinary seasons, when the rain-fall is favorable, the area irrigated will seldom be more than 50 per cent., even when canal water could be obtained for the whole area. The proportion of autumn crops and spring crops is about equal. With the exception of sugar-cane, cotton, indigo, and rice, the autumn crops are not irrigated: the other crops are generally left to be brought to maturity by the rain. The crops mentioned are exceptional;—some of them are grown, some are not, and the percentage of area occupied by such crops is small. Supposing all to be grown and all irrigated, the area so irrigated would not at present be 30 per cent. as a maxima; about 10 per cent. is a maximum. The spring crops irrigated may range between the same figures. Of course there may be exceptional, fortunately circumstanced, estates, where 80 per cent. of the area would be irrigated; but so few at present that, as a general rule, it may be said the offer of permanent Settlement would be withdrawn. In this district, though only the intelligent proprietors have shown anxiety to secure this boon, a considerable majority have accepted it.

66. In Boolundshuhur a very small minority have rejected it; about 90 per cent. have accepted it. The withdrawal now of the offer under any circumstances is much to be deprecated.

67. The number of estates in which the uncultivated area is less than 20 per cent., and which are fit for permanent Settlement, and the proprietors of which accept the offer, are 755. The Government demand which would be fixed in perpetuity amounts to Rs. 8,72,581. There are 60 estates the Revenue of which is Rs. 92,197, similarly in every way fit for permanent Settlement, and the proprietors decline it. Mr. Martin holds that they have the option of doing so. My opinion is that, where all the conditions qualifying for permanent Settlement exist, and the amount of assessment fixed by the Settlement Officers is the same, whether the arrangement is temporary or permanent, there is no option. Such estates should be declared to be settled in Perpetuity, and engagements should be taken accordingly.

68. The number of estates in which there is an excess of culturable land above 20 per cent., in which an addition has been made to the temporary demand on account of the excess, the proprietors of which have accepted the enhanced and permanent demand, is 24. The Revenue of these, including the addition, is Rs. 22,318.

69. There are 93 estates, bearing a Revenue of Rs. 71,466, not cultivated up to the mark, the proprietors of which refuse to engage to pay the enhanced demand.

70. 190 estates, the Revenue of which is Rs. 66,093, are proposed for temporary Settlement, as being altogether in too backward a state. In these are included the subdivisions of Bidowlee and Goredhunporè.

71. If the opinion expressed in para. is correct, the number and Revenue of the estates settled permanently and temporarily are as follows:—

<i>Permanently Settled.</i>				Number of Estates.	Total Amount of Revenue.
Altogether qualified, but the proprietors decline,	...	...	...	755	8,72,581
Enhancement accepted,	...	...	...	24	20,730
Temporarily settled,	...	...	...	60	92,197
Total,				839	9,85,508
Enhancement rejected,	...	...	...	93	71,466
Excluded as unfit,	...	...	...	190	66,093
Total,				283	1,57,559
TOTAL GRAND,				1,122	11,43,067

72. The Settlement of this district was commenced under Mr. Keene, who set the work in train, and assessed and reported on the sub-divisions of Goredhunpore, Boorhanah, and Shikarpore—making in the opening and the conclusion of his report some interesting general remarks. The sub-division of Goredhunpore has had to be specially treated subsequently to Mr. Keene's operations, owing to the injury from the Solani River.

73. In Boorhanah and Shikarpore his work has stood well the test of revision and examination. Mr. Martin succeeded Mr. Keene as Collector, and has happily remained in charge, to bring the Settlement to completion ; and most carefully and conscientiously has it been done.

74. Mr. A. Colvin and Mr. C. Grant, Junr., have aided in the work as Settlement Assistants, and have been most deservedly praised and thanked for their co-operation. Each officer has reported on the sub-division in which he especially worked. A reference to those reports will show not only the *modus operandi* of each, but with what care, diligence, and intelligence this most important duty of revision of Settlement has been performed. Every estate has been visited, every portion of every estate carefully examined, as the remarks on the statement show. Mr. Martin has of course supervised the proceedings of all, and has had repeated opportunities of revising his own work, and has been travelling among the people in every direction since it was finished, and feels confidence, and is justified in so doing, in the soundness of it.

75. The records of the proceedings, the reports and statements, have been inspected and approved by the late Senior Member of the Board during the progress of the work. All the papers have been most carefully examined by myself.—those prepared to prove the propriety of the assessment, not once, but repeatedly. Wherever doubt or questions have arisen, they have been carefully considered and answered ; and I believe that full data for the final opinion of the Board and Government are forthcoming in the papers submitted.

76. The addition of such a heavy work as the revision of the Settlement of a district to the ordinary duties of a Collector and Magistrate involves an amount of application and physical exertion which must be undergone to be fully appreciated. To Mr. Keene, who for a short time had this extra labor, but particularly to Mr. Martin, who has borne the brunt of it, the thanks of Government will, I trust, be awarded ; also to Messrs. Colvin and Grant, who participated in the work.

77. Mr. Martin mentions the Deputy Collectors, Rao Nanuck Chund and Mirza Vicar Alee Beg, most favorably. I beg to call attention to the remarks, in which I fully concur.

78. During the progress of the Settlement, the different officers in their reports have broached subjects which have been mostly disposed of as the work advanced, and which are therefore not now taken up.

79. The orders regarding the canal irrigation subject have been obeyed.

80. The outstanding balances are reported on in a separate Appendix.

F. WILLIAMS,

Commissioner.

A.

	Pergunnahs.	Total.	Cultivated.	Culturable.	Maafee.	Barren.
1	Bidowlee, ... { 1848, ... Now, ...	59,323	27,416	20,546	3,821	11,101
		55,224	20,544	19,545	3,035	8,541
		4,099	6,872	1,001	766	2,560
2	Goredhunpore, ... { 1848, ... Now, ...	41,302	16,556	17,561	...	12,049
		39,819	16,118	11,214	...	7,623
		1,483	438	6,347	...	4,426
3	Jhinjhana, ... { 1848, ... Now, ...	59,986	35,125	18,986	4,399	9,040
		57,436	25,011	16,744	632	7,485
		2,550	10,114	2,242	3,767	1,555
4	Bhooma Sumbul-hera, { 1848, ... Now, ...	81,274	41,215	33,295	97	16,657
		80,185	31,225	26,054	80	12,836
		1,089	9,990	7,241	17	3,821
5	Churthawal, ... { 1848, ... Now, ...	59,044	44,349	7,497	1,774	9,540
		58,092	39,586	7,192	539	6,659
		952	4,763	305	1,235	2,881
6	Boorhanah, ... { 1848, ... Now, ...	50,492	35,282	6,521	219	10,280
		50,276	33,666	6,327	50	8,423
		216	1,616	194	169	1,857
7	Bugra, ... { 1848, ... Now, ...	56,064	42,038	7,114	1,190	7,978
		55,460	39,434	6,858	539	6,363
		594	2,604	257	551	1,615
8	Thannah Bhowan, { Now, ... 1848, ...	57,414	39,313	11,746	6,389	9,242
		55,069	27,692	9,252	597	8,252
		2,345	11,621	2,494	5,792	990
9	Kyranah, ... { Now, ... 1848, ...	57,545	33,642	16,506	4,226	6,301
		55,210	29,116	16,135	1,096	5,733
		2,335	4,526	371	3,130	568
10	Khatowlee, ... { 1848, ... Now, ...	62,225	40,364	8,015	6,677	8,161
		59,683	39,372	6,467	6,304	6,548
		2,542	992	1,548	378	1,613
11	Jansuth, ... { 1848, ... Now, ...	61,971	48,763	10,767	1,227	6,264
		39,241	40,983	8,837	1,182	6,239
		2,730	7,780	4,930	95	25
12	Poor Chuppar, ... { 1848, ... Now, ...	58,699	41,103	10,164	1,259	9,742
		57,663	37,611	6,644	1,210	8,629
		1,036	3,492	3,520	49	1,113
13	Shikarpore, ... { Now, ... 1848, ...	64,015	48,478	6,999	1,980	10,867
		63,799	43,953	5,923	1,128	8,477
		216	4,525	1,076	852	2,390
14	Bhookurheree, ... { 1848, ... Now, ...	84,204	47,864	20,115	2,088	15,277
		77,163	40,913	18,975	1,624	14,511
		7,041	6,951	1,140	464	766
15	Mozuffernuggur, { 1848, ... Now, ...	68,397	41,917	8,328	12,628	8,227
		61,021	39,314	8,228	2,932	7,844
		7,376	2,603	100	9,696	383
16	Shamlee, ... { 1848, ... Now, ...	65,018	45,752	8,446	1,022	11,191
		64,767	45,455	7,199	922	9,798
		251	297	1,247	100	1,393
17	Kandhla, ... { Now, ... 1848, ...	66,973	50,329	13,833	2,500	9,669
		64,323	40,735	6,027	948	7,255
		2,650	9,594	7,806	1,552	2,414

B.

Pergunnah.	District.	Rate.			Remarks.
		Ra.	As.	P.	
Shamlee, ...	Mozuffernugger. ...	2	4	5½	
Kundhla, ...	Ditto, ...	1	15	7½	
Shikarpore, ...	Ditto, ...	1	14	4½	
Boorhana, ...	Ditto, ...	1	10	8½	
Bugra, ...	Ditto, ...	1	10	7½	
Agouta, ...	Boolundshuhur, ...	1	9	8½	
Rampore, ...	Saharunpore, ...	1	8	9½	
Burrun, ...	Bulundshuhur, ...	1	8	2½	
Nagul, ...	Saharunpore, ...	1	8	1½	
Thannah Bhowun, ...	Mozuffernugger, ...	1	7	3	
Munglour, ...	Saharunpore, ...	1	6	11½	
Khatowlie, ...	Mozuffernugger, ...	1	6	6½	
Deobund, ...	Saharunpore, ...	1	6	3½	
Mozuffernugger, ...	Mozuffernugger, ...	1	5	9	
Debaee, ...	Boolundshuhur, ...	1	5	2	
Hurroura, ...	Saharunpore, ...	1	5	0½	
Seharunpore, ...	Ditto, ...	1	5	0	
Jhinjhana, ...	Mozuffernugger, ...	1	4	7½	
Syannah, ...	Boolundshuhur, ...	1	4	2	
Anoopshuhur, ...	Ditto, ...	1	3	11½	
Poorchuppar, ...	Mozuffernugger, ...	1	3	9½	
Gungoh, ...	Saharunpore, ...	1	3	9½	
Sooltanpore, ...	Ditto, ...	1	3	8½	
Churthawul, ...	Mozuffernugger, ...	1	3	0½	
Bhugwanpore, ...	Saharunpore, ...	1	3	0	
Khoorja, ...	Boolundshuhur, ...	1	3	0	
Surra wah, ...	Saharunpore, ...	1	2	8½	
Mozuffurabad, ...	Ditto, ...	1	2	3½	
Nukoor, ...	Ditto, ...	1	1	11½	
Shikarpore, ...	Boolundshuhur, ...	1	1	11	
Puhasoo, ...	Ditto, ...	1	1	7	
Jowlee Jansuth, ...	Mozuffernugger, ...	1	1	0½	
Kyranah, ...	Ditto, ...	1	0	8½	
Jewur, ...	Boolundshuhur, ...	1	0	1½	
Ahar, ...	Ditto, ...	1	0	1½	
Roorkie, ...	Saharunpore, ...	0	15	10	
Fyzabad, ...	Ditto, ...	0	14	11	
Bhookurheree, ...	Mozuffernugger, ...	0	14	9½	
Jewalapore, ...	Saharunpore, ...	0	11	6	
Bidowlee, ...	Mozuffernugger, ...	0	11	4	
Bhooma Sumbulhera, ...	Ditto, ...	0	10	11½	
Goredhunpore, ...	Ditto, ...	0	8	2	

C.

Assessment.	Former.	16 per cent.	Revised.	Difference between columns 3&4.	Remarks.
1 Bidowlee, ...	37,905	6,080	29,125	23,045	
2 Goredhunpore, ...	19,458	3,120	17,217	14,097	
3 Jhinjhana, ...	63,056	9,480	56,698	47,218	
4 Bhooma Sumbulhera, ...	47,192	7,520	45,706	38,186	
5 Churthawul, ...	65,410	10,480	61,257	50,777	
6 Boorhana, ...	75,017	12,000	69,846	57,846	
7 Bugra, ...	86,362	13,760	81,691	67,931	
8 Thannah Bhowun, ...	56,244	8,960	57,081	48,121	
9 Kyranah, ...	49,571	8,000	52,307	44,307	
10 Khatowlee, ...	65,913	10,560	66,311	55,751	
11 Jansuth, ...	56,152	8,960	58,578	49,618	
12 Poor, Chuppar, ...	56,947	9,120	59,330	50,210	
13 Mozuffernugger, ...	59,974	9,600	68,842	67,842	
14 Bhookurheree, ...	53,507	8,560	60,770	52,210	
15 Shikarpore, ...	1,06,052	16,000	1,03,301	87,301	
16 Shamlee, ...	1,20,306	19,200	1,20,57	7,143	
17 Kandla, ...	1,00,759	16,000	1,11,410	95,410	

D.

Pergunnahs.	IRRIGATION.		Remarks.
	Thornton's Settlement.	Now. 1863-64.	
Poor, ...	None, ...	13,287	
Bhookurheree, ...	Ditto, ...	9,995	
Bhooma Sumbulhera, ...	Ditto, ...	214	
Mozuffernugger, ...	Ditto, ...	11,622	
Khatowlee, ...	Ditto, ...	12,217	
Jowlee Jansuth, ...	Ditto, ...	7,714	
Thannah Bhowun, ...	Canal, 3,590	6,775	
Jhinjhana, ...	Ditto, 1,151	3,456	
Churthawul, ...	Not ascertainable, ...	2,611	
Shamlee, ...	10,086	9,641	
Kyranah, ...	818	4,993	
Kandla, ...	15,060	16,276	
Boorhanah, ...	Cannot be ascertained, ...	10,881	
Bugra, ...	Ditto, ...	3,811	
Bidowlee, ...	Ditto, ...	...
Goredhunpore, ...	Ditto, ...	...
Shikarpore, ...	Ditto, ...	2,414	

Produce Table.—(Concluded.)

Pergunnah.	Rupees.																																			
	Wheat.	Barley.	Chunna (gram).	Ploughed land.	Rallow ditto.	Gaur.	Onion.	Tobacco.	Tarla.	Kurhur.	Vegetable.	Rales (melons).	Wheat and Barley.	Wheat and Gram.	Gram and Barley.	Barley and Peas.	Gochunee.	Mussoor.	Goofie.	Indigo.	Mutter (peas).	Tura.	Kungnee.	Ajowasen.	Land left for next crop.	Urhur.	Land prepared for Rubbee.	Ditto Khurreet.	Mustard.	Bount.	Linseed.	Kullounjee.	Dhunes.	Total.		
Mozuffernugger,	28½	4	9	...	7½	...	0½	0½	0½	0½	0½	0½	0½	0½	0½	...	...	0½	0½	...	0½	0½	...	...	...	...	...	...	...	...	...	...	...	...	...	50½
Bugra,	16½	1½	1½	2½	...	...	0½	0½	0½	0½	0½	0½	0½	0½	0½	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	47½
Poor Chuppar,	25½	8½	3½	0½	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	48½
Churthawal,	42½	1½	0½	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	45
Boorhana,	21	1-11ch	2-14ch	...	10-10ch	...	1ch	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	55½
Shikarpoor,	19	1½	0½	...	26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	48
Kandiah,	38½	0½	9½	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	50
Jowlee Janauth,	13	3½	3½	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	36½
Khatowlee,	26	1	6	...	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	46	
Bhooma Sumbulhera,	18	8½	2½	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	40
Bhookurherce,	38½	10½	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	37½
Shamlee,	39½	1½	11½	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	50½
Kyranee,	40½	2	11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	54½
Jhinjanah,	47	2	2½	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	53½
Thannah Bhowun,	48½	1½	2½	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	59½
Bidowlee,	55½	5	1½	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	63
Goredhunpore,	48½	5½	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	61½
Total,	536½	60	72	30½	56½	...	1½	...	1½	1½	11	2½	1½	6½	3½	...	0½	0½	5	16	0½	5½	0½	...	0½	14	2½	4½	...	...	...	...	...	...	...	835½
Average,	31	3	4	1	3	...	...	...	...	6	1	...	3	...	...	...	...	2	8	...	...	2	...	...	...	8	1	...	1	...	...	...	...	...	49	

Bazaar Prices of Grain for the last Twenty-four Years for Quabak Shamlee (obtained from the Chowdree of the Bazaar), minus 10 per cent. Fractions not calculated.

Description of Grain.	Average of 24 years.																									
	1840-41.	1841-42.	1842-43.	1843-44.	1844-45.	1845-46.	1846-47.	1847-48.	1848-49.	1849-50.	1850-51.	1851-52.	1852-53.	1853-54.	1854-55.	1855-56.	1856-57.	1857-58.	1858-59.	1859-60.	1860-61.	1861-62.	1862-63.	1863-64.	Total.	M. S.	M. S.
Wheat,	...	0 20	0 26	0 34	0 30	0 27	0 25	0 25	0 29	0 27	0 31	1 0	0 26	0 30	0 31	1 0	0 25	0 29	0 29	0 31	0 23	0 12	0 27	0 35	15 32	0 26
	...	0 29	0 36	1 1	1 5	0 36	0 38	1 1	0 18	1 2	1 14	1 7	0 32	1 7	1 14	1 10	0 36	1 10	0 9	1 14	0 25	0 17	0 38	1 14	22 13	0 38
	...	0 22	0 28	0 28	0 36	0 32	0 26	0 30	0 36	0 34	0 36	1 3	0 27	0 38	0 34	1 5	0 29	1 5	0 36	1 5	0 25	0 13	0 31	1 4	16 34	0 28
	...	0 25	0 34	0 27	0 35	0 33	0 29	0 27	0 36	0 28	0 32	1 4	0 28	0 30	0 27	0 39	0 28	0 36	0 34	0 36	0 27	0 15	0 31	0 35	18 39	0 31
	...	0 16	0 13	0 17	0 23	0 22	0 18	0 18	0 20	0 17	0 19	0 23	0 27	0 19	0 14	0 18	0 24	0 12	0 22	0 21	0 17	0 19	0 11	0 15	0 14	10 39	0 18
Peas,	...	0 25	0 30	0 32	0 38	0 35	0 27	0 32	0 38	0 36	1 1	1 5	0 29	1 1	1 1	1 8	0 31	1 5	0 39	1 7	0 27	0 14	0 32	1 5	21 2	0 35
	...	0 22	0 32	0 32	0 34	0 36	0 38	0 25	0 29	0 30	1 5	1 1	0 29	0 32	0 29	1 1	0 38	1 5	0 25	1 1	0 8	0 27	0 38	1 1	19 22	0 32
	...	0 19	0 32	0 28	3 33	0 36	0 27	0 22	0 36	0 28	0 36	1 5	0 36	0 32	0 36	1 2	0 37	1 5	0 24	0 32	0 8	0 23	0 34	0 36	19 3	0 32
	...	0 19	0 32	0 27	0 32	0 36	0 26	0 24	0 34	0 35	0 36	0 36	0 32	0 31	1 2	0 38	1 0	1 3	0 25	0 34	0 8	0 23	0 35	0 36	18 39	0 31
	...	0 20	0 30	0 32	0 28	0 27	0 35	0 27	0 27	0 34	0 34	0 32	1 1	0 33	0 36	1 1	0 38	1 10	0 25	0 33	0 8	0 26	0 36	0 34	18 23	0 31
Oord,	...	0 18	0 29	0 24	0 19	0 24	0 27	0 26	0 32	0 20	0 28	0 27	0 29	0 29	0 31	0 39	0 37	1 5	0 20	0 17	0 7	0 19	0 23	0 19	12 26	0 21
	...	0 16	0 29	0 29	0 19	0 25	0 29	0 24	0 29	0 23	0 27	0 36	0 36	0 29	1 0	0 38	0 37	1 5	0 21	0 29	0 7	0 21	0 33	0 29	16 35	0 28
	...	0 28	0 31	1 1	0 29	0 36	0 34	0 30	1 1	1 4	1 1	1 7	0 36	0 38	1 6	1 9	1 10	1 21	0 29	0 36	0 12	0 32	1 1	1 1	22 39	0 38
	...	0 22	0 30	0 36	0 20	0 28	0 32	0 31	0 36	1 4	0 32	1 3	0 32	0 32	1 0	1 1	1 1	0 36	0 26	0 30	0 11	0 27	0 32	0 29	19 3	0 32
	...	0 14	0 13	0 17	0 18	0 17	0 15	0 17	0 15	0 24	0 14	0 23	0 17	0 14	0 16	0 20	0 18	0 23	0 13	0 12	0 8	0 10	0 9	0 12	9 13	0 15
Larya,	...	0 18	0 17	0 21	0 23	0 20	0 18	0 24	0 18	0 23	0 23	0 26	0 18	0 18	0 17	0 23	0 26	0 26	0 16	0 30	0 8	0 17	0 17	0 17	11 39	0 20

(Signed) F. WILLIAMS,
Commissioner.

From S. N. MARTIN, Esq., Collector of Moozuffurnuggur, to F. WILLIAMS, Esq., Commissioner, 1st or Meerut Division (No. 217).—Dated Moozuffurnuggur, the 29th July, 1865.

SIR,—After a careful consideration of the Board's Circular No. 10 of 1865, dated 26th July, and accompaniments, regarding the Permanent Settlement of the North-Western Provinces, published at page 416 of the *Allahabad Gazette*, July 26th, I find there will be very little alteration in the proposals already submitted to you for this district. The result will be this:—

2. Mozzuffernugger belongs to the third class, having numerous estates fit, and others unfit, for a Permanent Settlement.

3. All estates now advanced up to the point of 80 per cent. of cultivation of assessable (*i. e.*, malgoozaree) area, the jummas of which have been revised and their area exempt from fluvial action, might be declared permanent. Other estates with less than 80 per cent. of cultivation, in those cases only where the maximum jumma has been accepted, are liable to revision, according to paragraph 5 of the Board's Circular,—the half asset cultivated acre rate being used merely as a guide to the assessment of the excess culturable area, which must always be closely examined by the Settlement Officer. But where the maximum jumma has been refused by the proprietors no revision will be necessary: in these cases the initial jumma will be considered a temporary assessment for 30 years "under the ordinary rules," without any binding clause on Government—see para. 7, Board's Circular.

4. The estates liable to revision under the present modification, where the maximum jumma has been accepted, are:—

1	2	3	4	5
Pergunnah.	Name of estate.	Initial jumma.	Maximum jumma already fixed to have come into operation after 15 years.	Name of Proprietors.
		Rs.	Rs.	
Boorhana, ...	Hooseinpore, ...	1,157	1220	Bukshoola Khan and others.
Shikarpore, ...	Kumalpore, ...	1,042	1,090	Zufroo and others.
Joulea, ...	Bhundore, ...	912	1,000	Sheo Lall and others.
Ditto, ...	Jurarah, ...	650	740	Hoosein Alee Khan and others.
Khatowlee, ...	Chundseena, ...	975	1,050	Bijly Singh and others.
Ditto, ...	Hubeepore, ...	195	226	Girdharee and others.
Ditto, ...	Simalaee, ...	800	900	Bijly Singh and others.
Ditto, ...	Ghaleebpore, ...	700	780	Mahomed Hussein & others.
Ditto, ...	Kukrala, ...	465	500	Nuwab Ruhmut Alee Khan.
Bhooma, ...	Tipurpore, ...	300	360	Mahomed Hussein.
Ditto, ...	Jarwur, ...	660	700	Mehndee Hussein.
Ditto, ...	Sikrara, ...	220	240	Nasir Hussein.
Thannah Bhowun, ...	Unbetha Yaqoobpore, ...	1,200	1,270	Munsoor Alee Khan.
Ditto, ...	Mahal Muzbutta, ...	3,580	3,730	Chundan Sing and others.
Ditto, ...	Jumalpore, ...	287	315	Gholam Hussein.
Ditto, ...	Ajeepoora, ...	130	160	Ditto.
Ditto, ...	Hurrur Futtehpore, ...	3,227	3,300	Oodeyram and others.
Jhinjhana, ...	Putnee Purtabpore, ...	189	287	Mehndee Hussein Khan.
Kyranah, ...	Bhookurheree, ...	150	200	Sheikh Mahomed.
Bugra, ...	Lukhan, ...	1,650	1,750	Goolzara and others.
Ditto, ...	Nusseerpore, ...	1,600	1,700	Ranjee and others.
	Total, ...	20,029	21,518	

5. The backward pergunnahs altogether unfit for Permanent Settlement are Bidowlete and Goredhunpore. I have recommended these be settled for ten years only; but under the present orders (paragraph 8, Board's Circular) I suppose the Settlement must be extended to twenty years, excepting of course those swampy estates in Goredhunpore handed over to the Canal Officers to drain. These, I presume, will have to be exceptionally treated whenever the Canal Department reports that the marshy lands have been fairly reclaimed.

6. All estates liable to fluvial action have been formed into separate mehals, in conformity to the Board's Circular No. 29, dated 7th December, 1864 ;—these will be temporarily settled, I take it, for not less than twenty years. Purely "Khadir" estates will all come within this class ; but where nearly the whole estate is on the Bangur, only a small fraction of the area being in the Khadir, I would extend the privilege of a Permanent Settlement, if otherwise fit.

7. Paragraph 9 of the Board's Circular has already been carried out ; so also has paragraph 10, where not inconsistent with the present orders.

8. If the above summary be correct, you will at once perceive there need not be much delay in remodelling the financial position of such estates as are in a condition to be declared permanently settled. I await your directions before I take any further steps in the matter.

I have, &c.,

S. N. MARTIN,

Collector.

From F. WILLIAMS, Esq., Commissioner, 1st or Meerut Division, to R. J. LEEDS, Esq., Officiating Collector, Mozuffernugger (No. 270).—Dated the 16th October, 1865.

SIR,—I have the honor to acknowledge the receipt of your predecessor's letter No. 217, dated the 29th July last, on the subject of the introduction of the Permanent Settlement in the Mozuffernugger District.

2. The views expressed in Mr. Martin's 3rd para. are, I believe, quite correct, and the jumma of the estates in which the owners have accepted a progressive demand should be raised.

3. The estates mentioned in para. 4 should be carefully examined, the assessment, if necessary, revised, and the result reported.

4. *Para. 5.*—The term will be fixed by the Board and Government.

5. *Para. 6.*—I observe some estates proposed for Permanent Settlement in which liability to injury from the river is mentioned,—Secunderpore, No. 38, Pergunnah Churthawul, for instance. Are there any such which have been proposed for permanent, but should be temporary? Where only a small fraction is in the Khadir, Temporary Settlement would not be necessary.

I have, &c.,

F. WILLIAMS,

Commissioner.

From S. N. MARTIN, Esq., Collector, Mozuffernugger, to F. WILLIAMS, Esq., Commissioner, 1st or Meerut Division (No. 330)—Dated Mozuffernugger, the 18th December, 1865.

SIR,—In continuation of my previous letter No. 217, dated 29th July, 1865, and your reply No. 270, dated 16th October, I do myself the honor to report upon the conclusion of the Permanent Settlement in conformity to the Board's Circular Order No. 10, dated 26th July, 1865, premising that this district comes under the third class, having numerous estates fully developed, mixed with others not so advanced.

2. I have visited all those estates in which an augmentation to the initial jumma has been accepted by the proprietors, and, applying the cultivated acre rate to the culturable area in excess of 20 per cent. of assessable area (see para. 5 of the Board's Circular), have in a separate statement given my reasons for differing from such assessment—the reasons being that either the culturable was too poor to be rated at the half-assets cultivated acre rate, or, as frequently happened, the Settlement

Officer in his first proposition had already calculated probable income from extension of cultivation,—as in the instance of Hurhur Futtehpoore, Pergunnah Thannah Bhowun, and others.

3. In calculating the amount of culturable area I have taken into consideration both new and old fallow lands, commonly known as “*judeed*” and “*cudeem*.” I might possibly have left out the new fallow, as a certain proportion of culturable land must annually rest to gain strength for next cropping; but I preferred adding both together, to obviate any tendency to under-estimate. Much of the recent fallow has of course been ploughed up since the Settlement, and other fields have taken their place; but this interchange does not affect the correctness of the estimate.

4. I can safely say that I have been most cautious in the proposed assessments for excess culturable area: every village has been examined, and its capabilities closely tested. The consequence is, I have thought it necessary to alter my first proposals, made in conformity to the Board's first Circular No. 18, dated 1st August, 1864, in the cases of three estates only—

Pergunnah.	Mouzah.	Addition to first proposition.
Bhooma,	Jurwur,	50 Rs.
Bugra,	Lekhan,	100 „
Kyran,	Bookurhairee,	50 „

Should these alterations meet with approval of superior authority, I will lose no time in avowing the permanent jummas, of the acceptance of which I have not the least doubt; but I have refrained from collecting the permanent jummas until the whole scheme is formally sanctioned.

5. There are numbers of estates in this district with less than 20 per cent. culturable area where the initial jumma is adequate, and might be declared permanent, but the proprietors refuse to engage permanently: there of course the Settlement will be temporary, at the initial jumma for thirty years, without any expectation for the future. The annexed general statement will show the results throughout the whole district.

6. Pergunnahs Bidowlee and Goredhunpore are exceptional (see correspondence marginally noted), and will, I presume, be settled for twenty years only. Mr. Colvin's assessment of Bidowlee, as you are aware, I have already revised and reported with full particulars. In Goredhunpore there are the swampy estates just received back from the Canal Officer, Captain J. T. Forbes, R.E.;—these will form the subject of a separate address to you at the close of the year. Special orders will be required concerning them, as to the duration of Settlement and mode of future management.

7. In a verbal conversation we had together, you directed me to revise the jummas of those estates in which the rentals formed under the operation of Act XIV., 1863, showed the initial jummas to be less than a full moiety of present assets: this I have done, and submit the result in a separate tabular statement for your approval. I have proposed an increase of 50 Rs. to Murree Sadat, 65 Rs. to Kowalee, 100 Rs. to Khoknee, 100 Rs. to Meemla Kheree, 90 Rs. to Khurpour, 100 Rs. to Rahkura, 50 Rs. to Nulehree;—total augmentation, Rs. 555.

8. “Khadir” and “Bangur” estates have been marked off and separate jummas fixed, in obedience to the Board's Circular No. 29, dated 7th December, 1864. The only variable portion will be the low lands liable to fluvial action, and these will be treated

in cases of injury as directed by the Board. Similarly, all purely "Khadir" estates, with the entire area lying along the banks of the Ganges, are peculiarly liable to inundation and variableness in their assets; consequently, in all these estates clauses have been introduced into the Settlement misl to effect that the jummas are temporary; as, in cases of diluvion and alluvion, alterations may hereafter be called for on any sudden change of the river. In your letter No. 270, dated 16th October, you were pleased to approve of the proposition contained in the 6th paragraph of my letter No. 217, above alluded to. I am inclined to think the jummas of "Khadir" estates should run for twenty years only.

9. The remarks in the preceding paragraph do not, I think, apply to estates adjacent to the small streams, such as the Krishnee, Kalee Nuddee, and Hindun, for these rivers follow very much their old beds year after year; very little displacement occurs, and when land is cut up the custom called *muchaseen* prevails—i. e., the river remains as before the boundary. These slight oscillations, in the long run, leave estates on both banks nearly the same in area; consequently there is no increment nor decrement of jummas. It is only the violent rivers, like the Ganges and Jumna, that make such fearful havoc in heavy rainy seasons. The area of Secunderpore, No. 38 Pergunnah Churthawul, referred to in para. 5 of your letter No. 270, dated 16th October, has not varied to any perceptible degree since the last Settlement; nor during the currency of the old Settlement has there been any case of alluvion and diluvion in estates bordering these small streams.

10. I am not aware of any other observations called for. Messrs. Keene, Colvin, Grant, and myself carefully visited every village in the district before we submitted our assessments, which we believe to be a fair average moiety rental; and I confidently leave the result in your hands, in the hopes that the Settlement of the entire district will meet with the approval of Government.

I have the honor to be,
 Sir,
 Your most obedient Servant,
 S. N. MARTIN,
 Collector.

List of Estates in which the profits exceed the authorized moiety according to rental formed under Act XIV., 1863, subsequent to avowal of jummas.

Pergunnah.	Mousah.	Average in- come of past three years, (1870 F.S., 1871 F.S., and 1872 F.S.).	Rental fixed by conversion, Act XIV. 1863.	What the jumma ought to be accord- ing to Sabha runpore Cir- cular, taking column 3 as the rental.
1.	2.	3.	4.	5.
Bhoona,	...	Sikundurpoor,	...	...
		Ra. As. P.	Ra. As. P.	Ra. As. P.
		2,168 1 0	2,275 12 9	900 0 0 1,063 0 0
Ditto,	...	Jurwur,	...	...
		1,504 15 6	1,721 0 0	650 0 0 725 0 0
Ditto,	...	Jumalpoor Bangur,	...	...
		915 13 0	491 13 9	350 0 0 452 0 0
Joulee Jansath,	...	Murree Sadat,	...	...
		758 6 7	1,538 .4 9	450 0 0 374 0 0
Ditto,	...	Kowalee,	...	...
		2,147 13 0	1,710 13 9	735 0 0 1,063 0 0
Ditto,	...	Bhundour,	...	...
		1,466 3 0	1,010 5 3 (for half the estate only.)	912 0 0 707 0 0

(for half the
estate only.)

Ditto,	...	Kharee Ferozabad,	...	1,768	7	0	2,348	14	6	900	0	0	856	0	0	Mr. Charles Grant, Settlement Officer, raised the jumma, owing to canal irrigation, from Rs. 497 to Rs. 900 under the present Settlement—not far from double; and although the fixed rents might allow of the jumma being assessed at Rs. 1,000, I think it would be disheartening to make so heavy an increase; therefore recommend the first proposition being retained. This estate belongs to the deeply-indebted Syuds of Joulsee, Casm Ali and others.
Khatoulsee,	...	Johra,	...	861	11	6	1,070	11	9	400	0	0	412	0	0	Owing to canal irrigation, Mr. Charles Grant, Settlement Officer, raised the jumma from Rs. 287 to Rs. 400. The whole malgozaree area is only 283 acres. I would not alter the first proposition, although cash rents (if always fully recovered, without arrears, &c.) might justify a jumma of Rs. 500.
Ditto,	...	Bureeo,	...	2,131	7	10	2,500	5	3	1,400	0	0	1,530	0	0	A very deficiently canal-irrigated estate, the rajbaba running at a low level, therefore only partially available. The proprietor, Bijae Sing, is embarrassed with debt. The soil is mostly fair "Koolsee," but I would deprecate any increase to the proposed jumma of Rs. 1,400.
Bhokurhersee,	...	Bhoagoor,	...	990	14	9	1,510	4	6	600	0	0	481	0	0	This is a middling Bangur and Khandir estate; former sub-leases much below the present fixed rental; considerable mortality among the Chowhan cultivators, owing to bad water; much of the soil sandy. For a permanent jumma, Rs. 700 is the highest should ever be demanded.
Ditto,	...	Kholnee,	...	1,318	1	10	1,622	13	3	600	0	0	631	0	0	This is an uninhabited estate of fair capabilities, having a large canal-irrigated area (499 acres, out of a total malgozaree area of 589 acres). A permanent jumma of Rs. 700 is as much as should be demanded: the old jumma of Regulation IX., 1838, was Rs. 476, and this at two-thirds rental.
Ditto,	...	Meemla Kharee,	...	1,696	11	5	1,794	1	3	700	0	0	906	0	0	An uninhabited estate, the property of impoverished Syuds of Kakronlee. The old two-thirds asset jumma was Rs. 520. A full moiety jumma for a canal-irrigated village might be fixed at Rs. 800, certainly not higher, due regard being paid to the chapter of accidents.
Ditto,	...	Kharpour,	...	1,221	15	0	1,614	0	0	610	0	0	690	0	0	This indifferent village is on the composition of the village site. Syuds compose the village site. The old two-thirds asset jumma was Rs. 420. For a Permanent Settlement, Rs. 700 is the very highest. It is doubtful whether the semindars would accept a Permanent Settlement at an increase upon this.
Ditto,	...	Rubbura,	...	3,019	14	0	3,368	4	3	1,300	0	0	1,479	12	0	A very large proportion of sandy "Bhoor" (1,458 acres, out of a cultivated area of 2,070 acres); irrigation deficient; the proprietors impoverished Syuds of Joulsee, Casm Ali and others. For a permanent jumma we might go as high as Rs. 1,400, but not a farthing higher.
Ditto,	...	Nulehree,	...	1,081	14	0	1,143	8	0	450	0	0	525	0	0	An uninhabited estate, with a "Bhoor" out of a total cultivated area of 583 acres. The income of these sandy Palkashit Assamese, peculiarly liable to fluctuate. Cultivators bolt, the jumma might be raised to what it was in the Permanent Settlement, but I doubt if it will be accepted.

Permanent Settlement Proposals (Circular Order, Board of Revenue, No. 10, dated 26th July, and Government of India No. 1666, dated 19th June, 1865).

Paragraph.	Name of Muzah.	Culturable area in excess of ½ per cent. assessable (malignant) area.	Initial jumma.	Permanent jumma in conformity to Board's Circular Order No. 10, dated 26th July, 1865.	Remarks.
1.	2.	3.	4.	5.	6.
Thannah Bhowan, ...	Aleepore, ...	75 Acres.	Rs. As. P. 130 0 0	Rs. As. P. 160 0 0	<p>This first proposal made by the Collector in conformity to the Governor-General's Notification No. 544, dated 5th June, 1864, was to assess the excess area at Rs. 30, making Rs. 130 in all. By the cultivated acre-rate the jumma on excess area would be Rs. 81-4-0. The cultivable area is very inferior indeed, and the proprietor is excessively poor, and in debt; very little hope of the waste village; two wells for irrigating, but nearly dry from as to be of any use. The first proposals are retained, as sent to Rs. 160 permanent jumma. The Putwarees broken up since Settlement; no hopes of further increase. 1373 Fulees are stated by the Putwarees to be Rs. 129; out of this, Road Fund, Dak, School, and Putwaree's wages, amounting to Rs. 35-8-3 have to be paid, leaving a net profit of about Rs. 87. This estate was given in reward for good services to Syud Goolam Husnayn, of Fulee, who does not appear to look closely after any of his villages.</p>
Ditto, ...	Harhur Futtehpore, ...	1,377	3,327 0 0	3,300 0 0	<p>November 11th, 1865.—I have re-examined the cultivable area. I found it covered with dhak jungle, in which state it has always remained within memory of man; not a wall of any kind, and much of the land of a very doubtful character.</p> <p>The first proposal for excess of cultivable area was Rs. 73, making a total permanent demand of Rs. 3,300. The cultivated acre-rate of Rs. 5-13-4 is not applicable, because the cultivation was contracted when measurements were made, and the Settlement Officer calculated the income of 1,100 acres of cultivable area when he first fixed the jumma. The cultivated acre-rate of the neighbourhood is Rs. 3-10-7.</p> <p>There are few residents in the village, and those belong to the very worst class of Rangurs, who cultivate nothing but the inferior crops. By the Putwaree's nikasses the entire income for 1271 Fulees is stated to be Rs. 3,097; and for 1273 Fulees, Rs. 4,389-3-0; while Oodeyram <i>aminidars</i>, states that for the present he is making very little profit out of the estate, and that it will be before he is able to restore the property to its former condition. This village was burnt estate closely, and found the statement of Oodeyram to be.</p> <p>Since the Settlement 1,044 beegahs 17 biswahs fallow land broken up; but the Settlement Officer rated 1,100 acres, or 2,200 beegahs, which standard has not yet been arrived at. Many of the cultivators bolted after the Mutiny, and have never returned. Lalla Oodeyram has been put to considerable expense in locating new tenants and giving advances to the old cultivators.</p>

Ditto,	...	Jumalpoore,	...	80	267 0 0	315 0 0	By the first proposition Rs. 28 were assessed on excess cultivable area, making a total permanent demand of Rs. 315. As the cultivated acre-rate of Rs. 1-13-10, the sum would be Rs. 164-2-8. The cultivable area is fair land; there are no resident cultivators—they come from Kootubgurb; consequently, expense and trouble to keep cultivation up to mark. The present proprietor, Goolam Hunayn, is an impoverished Syud. Profits not equal to the Government jumma; may be so hereafter; the first proposal should stand. In Kham tahseel for 1273 Fuzlee, only Rs. 30 profits after deducting jumma, cesses, and Putwarees' fees. Although Kham tahseel was a loss, there is no reason why for the future the profits of the estate should not be considerably augmented, if the proprietor will only exert himself to locate cultivators, improve the cultivation, &c. I have re-examined the cultivable area. The soil is "Koolie;" there are two wells available; the cultivation has been a long time neglected, but that is owing to scarcity of hands, neglect under Kham tahseel, and other removable causes. This estate was bestowed as a reward to the present owner for loyal services during the Mutinies.
Ditto,	...	Rimbaytah Yacoobpoore,	...	306	1,200 0 0	1,270 0 0	By the first proposition Rs. 70 were assessed on the excess cultivable area; if the cultivated acre-rate of Rs. 2-4-4½ be applied to the cultivable, the amount would be Rs. 694; but the cultivable area is indifferent. The cultivators are a bad lot of Rajpoots, were formerly proprietors, and the village was confiscated for misconduct during the Mutinies of 1857, and given to Munsoor Ali Khan, as a reward for good services. The old jumma was Rs. 1,130; the proposed permanent jumma is Rs. 1,270, and I see no prospect of increasing it. The present profits, after paying the jumma and expenses, are only Rs. 800; by the first proposition the profits stated to be Rs. 858-11-3. The Putwaree deposes that only eleven pucks have been broken up since the Settlement;—the former Rajpoot proprietors, now to exert themselves since their property was confiscated and bestowed in reward.
Ditto,	...	Mahal Mujibhatta, Than-nah Bhowan.	...	637	3,530 0 0	3,730 0 0	10th November, 1865.—I have to-day examined this estate. The cultivable area is covered with dhak jungle, has not been cultivated for years, and looks inferior. No wells nor means of irrigation of any kind. The proprietor and tenants justly complain this leave complains that the tenants improving the position of mumm jumma, and should not be exceeded.
Shikarpore,	...	Kumalpoore,	...	60	1,042 0 0	1,090 0 0	cultivable area; the cultivated acre-rate is Rs. 2-5-3. If >7-1 of the cultivable area, including recent fallow, before fixing the initial jumma of Rs. 3,530. The rest of be broken up in course of time. The town of Thannah is all abandoned. The place has still a very dilapidated appearance. The proprietors are Sheikhmadras and Bunnees—the former by no means well off. By the nikasee of Putwaree for 1273 Fuzlee, profits stated to be Rs. 2,400; and for 1273 Fuzlee, profits are Rs. 2,425-1-0. November 9th, 1865.—I have re-examined the cultivable area. I find some of it has been broken up; it consists of uneven patches close to the River Kirshonee; "Reh" has affected a part of it; the rest is indifferent. The first proposition is as much as can safely be demanded.
							The first proposal for excess of cultivable was Rs. 48, making a total permanent demand of Rs. 1,090. If the increase should be about Rs. 98; but the cultivable area is sloping down to the Hindun River; wells impossible to be made, none but the coarser crops—such as mote, bajra—could possibly be made.
							By the Putwaree's nikasees the income for 1271 Fuzlee is said to be Rs. 1,780. By the Putwaree's nikasees for 1273 Fuzlee the entire income of this estate is stated to be Rs. 2,104-6-6, out of which has to be defrayed the Government jumma, plus cesses. No fresh land broken up since the Settlement, upwards of three years ago. Rs. 1,090, therefore, is ample for a permanent demand.

Permanent Settlement Proposals.—(Continued.)

Culturable areas in acres in excess of ½ per cent. assessable (malgoo-saree) area.	Initial jumma.	Permanent jumma in conformity to Board's Circular Order No. 10, dated 26th July, 1865.	Remarks.
3.	4.	5.	6.
Acres. 267	Ra. As. P. 650 0 0	Ra. As. P. 760 0 0	as Ra. 50, making a total permanent demand of Rs. 700. If the augmentation would be Rs. 209-10-2. The culturable area is ; it has not had a plough over it for some years. The zemindars misadiration with reference to the Board's last orders, I am of ad without encroaching upon the legitimate resources of these vills stated to be Ra. 735; the permanent jumma is therefore adequate.
136	300 0 0	360 0 0	The first proposal for excess culturable area was Ra. 60, making a permanent total demand of Ra. 360. If the cultivated acre-rate (As. 14-11½) be applied to the excess area, the amount would be Ra. 137-2-4. This village is indifferent, fallow for years; no wells nor irrigation available. The proprietor Sumbulbars, over head and ears in debt to the Bunneesa. The first proposal for 127½ Fualas, profits stated to be Ra. 248; and this, after a sum of culturable area; of the remainder, 82 beegahs 18 biswabs said to be capital.
57	220 0 0	240 0 0	The first proposal was Ra. 20 for excess culturable area, making a total demand (permanent) of Ra. 240. If the cultivated acre-rate (As. 15-0½) be applied, the amount would be Ra. 85-2-4. The culturable is indifferent; —no wells nor means of irrigation, entirely dependent on the rains, and cut up into ravines; what cultivation there is to be seen is in the hands of Pakshat Assamees. The Syud proprietors are extremely impoverished. The shares of Mahomed Hoesain and Sufdar Ali (½ of 5 biswabs) have just been sold for debt, in execution of decree. The first proposals had better stand. By Putwarce's nikasees, profits not at present equal to Government demand.
213	800 0 0	900 0 0	The first proposal for excess of culturable was Ra. 100, making a permanent demand of Ra. 900. If the cultivated acre-rate (As. 11-6) applied to the excess area, the augmentation would be Ra. 153-1-6. The culturable area is "Bhoor"—a very inferior class of soil, yields poor returns; no wells—dependent on rains of heaven; the soil is extremely uneven and sandy, and cannot possibly bear a heavier assessment than that already proposed; at present nothing but rant gran on it. The cultivators belong to the worst class of Goojurs and Kurgurs. Altogether 40 houses in the village. By the Putwarce's nikasees for 127½ Fualas, the profits are stated to be Ra. 822; clearly the permanent jumma cannot be raised beyond Ra. 900.
			Khatonlee, Simolee,

	111	975	0	0	1,050	0	0
Ditto	Chundaena,	...	...	...	...	...	...
Ditto	Ghalibpore,	...	...	...	...	...	...
Khatoulee,	Unbeebpore,	...	...	...	...	...	...
Ditto	Kukrala,	...	...	...	...	...	...
Joulee Janauth,	Bhundora,	...	...	...	...	...	...
Ditto	Juradra,	...	...	...	...	...	...

Permanent Settlement Proposals.—(Concluded.)

Pergunnah.	Name of Mouzah.	Culturable area in acres in excess of 1/4 per cent. assessable (malgoo-saree) area.	Initial jumma.	Permanent jumma, in conformity to Board's Circular Order No. 10, dated 26th July, 1865.	Remarks.
1.	2.	3.	4.	5.	6.
Bogra,	...	...	...	...	...
	Lekbau,	Acres.	Ra. As. P.	Ra. As. P.	<p>The first proposal was Ra. 100 for the cultivated acre-rate (Ra. 1-3 and will no doubt come under orders, I think Ra. 200 may be</p> <p>total permanent demand of Ra. 1,750. If Ra. 388-4-8. The culturable area is fair land, and with reference to the Board's last order, I think Ra. 200 may be</p> <p>November 4th, 1865.—To make sure, I have again examined the culturable area. I find a few acres (about 40) have been broken up since the Settlement. No wells—the soil is too sandy to admit of sinking wells. Should there be a scarcity of rain, the spring harvest must prove a failure. Ra. 1,850 I consider quite sufficient for a Permanent Settlement.</p> <p>The proprietors are a numerous Rajpoot community, upwards of 400 shareholders, and at loggerheads with each other.</p>
Ditto,	Nusseerpore,	321	1,850 0 0	1,850 0 0	<p>re-assessed the on the excess culturable area. If the cultivated acre-rate (Ra. 1-3-0) could be for a Permanent Settlement, Ra. 490-4-6; but there is much "Bhoor," and indun is very uneven and raving. The cultivators are Rajpoots, who mostly neglect cultivation. All the "Rajpoots" in this neighbourhood and the Saharunpala to cultivating their fields; and there is little prospect of their altering settlements. The Putwarce's nikasses for 1272 Fuzlee, the net profit to the zemindar is stated to be Ra. 1,300. I have re-examined the culturable area, and found not a single acre broken up since the Settlement. The land is so poor, the cultivators say it requires three or four years rest before anything like a return can be expected. There are no wells. The first proposition had better stand.</p>
	Nusseerpore,	396	1,400 0 0	1,700 0 0	<p>By the first proposition Ra. 63 were assessed on excess culturable area, making in all Ra. 1,290 permanent demand. If the cultivated acre-rate (Ra. 1-12-9) be applied, the excess jumma should be Ra. 122-8-0. Culturable consists of uneven land close to the Hindun valley, no fresh land broken up since for 1271 Fuzlee, profits stated to be allowed to stand. The proprietors are a numerous Pathan co-partnership, in needy circumstances. The entire income for 1272 Fuzlee was Ra. 2,080-11-6; out of this had to be defrayed Government jummas and cesses.</p>
Boothana,	Hoosainpore,	68	1,157 0 0	1,320 0 0	

Kyran	...	Kookurheres,	...	306	180 0 0	250 0 0	0	0	By the first proposition Rs. 80 were assessed on excess culturable area. If the cultivated acre-rate (Rs. 37-8-0) be applied, Rs. 2,437-8-0 would be the assessment; but this is absurd. There were only four acres cultivated at the time of the Settlement: all the rest had been neglected by the Goojur proprietors, and a penal farm was made for Rs. 150, including income from the land. Mahomed, owner of five biswahs, for 15 years, would, I think, take place after expiry of term. The excluded proprietors now d to re-enter on any terms. The jumma of the last Settlement was Rs. 70; for a Permanent Settlement this was raised to Rs. 200. There are no wells on the estate, which is an off-lying hamlet of Bhoora. The farmer is doing his best to break up the lands, and has at considerable expense (he says Rs. 500) introduced canal water. Under the circumstances, there being no inhabitants on the estate, and the lands having been abandoned for years, I see no prospect of getting more than Rs. 250, and this is in excess of double the old jumma under Regulation IX., 1833.
									November 8th, 1865.—I have re-examined the lands. The farmer has broken up about 100 acres, at much expense in digging out the roots of shrubs, &c.; his profits are reputed to be about Rs. 200, but this has all been sunk in improvements, and he suffered a dead loss in 1871 Fuslee. The permanent jumma after close of farm should not be above Rs. 350.
Jhunjhans,	...	Putnee Furtabpore,	...	509	189 0 0	387 0 0	0	0	By the first proposition the excess culturable was assessed at Rs. 98, making the total maximum jumma Rs. 287, to come into operation beginning of 1879 Fuslee. At the Settlement only 171 beegahs 18 biswahs cultivated, the rest very old fallow, used by the wretched Goojur cultivators for depasturing cattle; the small amount of cultivation made the acre-rate as high as Rs. 5-11-10, quite inapplicable to the extensive culturable area. The malgoosarees acre-rate of the revised assessment is Rs. 0-8-4,—that applied to excess of culturable would give Rs. 256-7-9; but this estate is altogether unable to bear so heavy an increment to the initial jumma. There are altogether twelve masonry wells on the property, with water 20 to 30 feet distant; but there is nobody to cultivate, nor will any outsiders face the thievish Goojur population of the neighbourhood. The wells above referred to have been deserted for many years. Bacooreas have been located here, with the view of competing against the Goojurs ("diamond cut diamond"); but unfortunately during the first two years of their residence all the Khureef crops were burnt up from want of timely rain. By the Putwarree's nikasees for 1871 Fuslee, profits stated to be only Rs. 36-7-9 without paying cesses; and for 1872 Fuslee, Rs. 60-4-6—nearly all the rents being leased. Rs. 287 had better remain as permanent jumma.

General Statement showing Results of Permanent and Temporary Settlement, Zillah Mozuffernagur.

District.	Pergunnah.	2.	Number of villages having less than 20 acres per cent. culturable area, and fit for a Permanent Settlement—proprietors being willing to engage permanently.	3.	Initial jumma, to be made permanent.		Number of villages having less than 20 acres per cent. culturable area, fit for a Permanent Settlement, but proprietors decline to engage permanently.	6.	Initial jumma to remain temporary.	Number of villages having more than 20 acres per cent. culturable area, whose proprietors are willing to engage permanently.	PERMANENT.			Number of villages having more than 20 per cent. culturable area, whose proprietors are unwilling to engage permanently.	Initial temporary jumma of these villages.			Number of backward and detached villages unit for a Permanent Settlement, therefore excluded.	14.	15.	16.	17.	TOTAL JUMMA OF PERGUNNAH.
					4.	5.					8.	9.	10.		11.	12.	13.						
					Ra.	As.		Ra.	As.		Ra.	As.	Ra.	As.	Ra.	As.	Ra.	As.					
	Shamlee,	...	49	72,980	26	46,915 0	...	...	...	...	1	162	...	...	...	...	...	...	...	...	...	...	...
	Jhinjhana,	...	27	30,171	6	5,062 0	...	...	...	...	28	21,276	...	...	...	...	...	...	...	...	...	...	...
	Kyran,	...	31	33,228	5	9,475 0	...	...	...	...	18	8,984	...	...	...	...	...	...	...	...	...	...	...
	Thannah Bhowun,	...	34	27,432	14	14,301 10	...	...	...	...	7	6,974	...	...	...	...	...	...	...	...	...	...	...
	Bidowiee,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Tehseel Shamlee,	...	141	1,63,811	51	75,753 10	...	9,064	598	9,663	54	37,396	...	...	...	...	...	...	...	...	...	...	...
	Mozuffernagur,	...	59	65,492	2	4,100 0	...	...	...	...	...	1,000	...	...	...	...	...	...	...	...	...	...	...
	Bugra,	...	70	76,721	...	...	...	...	...	...	...	1,720	...	...	...	...	...	...	...	...	...	...	...
	Churthawnl,	...	61	59,306	1	660 0	...	...	...	...	...	1,670	...	...	...	...	...	...	...	...	...	...	...
	Poor,	...	47	48,370	2	9,650 0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Gordhunpore,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Tehseel Mozuffernagur,	...	237	2,49,889	5	14,410 0	...	3,250	200	3,450	8	1,390	...	...	...	...	...	...	...	...	...	...	...
	Boorhana,	...	35	61,447	...	...	...	1,157	63	1,220	7	7,242	...	...	...	...	...	...	...	...	...	...	...
	Shikarpore,	...	53	96,791	...	...	...	1,042	48	1,090	8	6,468	...	...	...	...	...	...	...	...	...	...	...
	Kandhia,	...	74	1,07,310	...	...	...	...	...	...	2	4,100	...	...	...	...	...	...	...	...	...	...	...
	Tehseel Boorhana,	...	162	2,64,548	...	...	...	2,199	111	2,310	17	17,810	...	...	...	...	...	...	...	...	...	...	...
	Jowlee Janauth,	...	60	56,531	...	...	...	1,562	178	1,740	1	600	...	...	...	...	...	...	...	...	...	...	...
	Bhookurherce,	...	46	50,221	...	...	...	...	...	...	4	6,170	...	...	...	...	...	...	...	...	...	...	...
	Khutoulee,	...	68	58,076	...	...	...	3,135	331	3,466	9	5,100	...	...	...	...	...	...	...	...	...	...	...
	Bhooma Sumbulhera,	...	41	29,505	4	2,034 0	...	1,520	180	1,700	...	...	...	...	...	...	...	...	...	...	...	...	...
	Tehseel Janauth,	...	215	1,94,333	4	2,034 0	...	6,217	679	6,896	14	11,870	...	...	...	...	...	...	...	...	...	...	...
	GRAND TOTAL,	...	755	8,72,581	60	92,197 10	...	20,730	1,588	22,318	93	71,466	...	...	...	...	...	...	...	...	...	...	...

NOTE.—In addition to the augmentation for excess culturable area noted above, upon reconsideration, and with reference to the Board's last Circular No. 10, dated 26th July, 1865, it has been determined to offer a Permanent Settlement to the proprietors of three villages.—Jurrur, Pergunnah Bhoona, 50 Ra.; Lekhan, Pergunnah Bugra, 100 Ra.; and Bhookurherce, Pergunnah Kyran, 50.—a total excess of Rs. 200 on first proposition. If this be agreed to, of which I think there can be no doubt, then the permanent jumma in column 16 will be increased by 200 Ra. Monzah Bhookurherce, however, has been for the present penally farmed for fifteen years from 1271 Fustee. The permanent jumma will come into operation after close of farm,—not before, I think.

S. N. MARTIN,
Collector.

FROM

S. N. MARTIN, ESQUIRE,
Collector of Moozuffernugger,

To

F. WILLIAMS, ESQUIRE,
Commissioner of Revenue, 1st Division, Meerut.

Dated Moozuffernugger, the 22nd May, 1865.

SIR,

IN reporting the completion of the settlement commenced in the cold season of 1860, the subject necessarily divides itself into five heads :—1st, Adjustment of Boundaries ; 2nd, Survey ; 3rd, Assessment ; 4th, Record of Rights ; 5th, General Remarks. Before entering into details, it is proper that I should state the success or otherwise of the past settlement ; and this may be best done by a tabular return of collections and balances, as far as ascertainable.

Year.	Demand.		Collections.		Balances.	
	Rs.	As. P.	Rs.	As. P.	Rs.	As. P.
1856-57	11,12,029	3 7	11,10,506	11 1	1,522	8 6
1857-58	11,13,049	0 1	11,02,836	12 2	10,212	3 11
1858-59	11,17,633	0 1	11,08,316	3 7	9,316	12 6
1859-60	11,17,803	10 7	11,08,432	3 1	9,371	7 6
1860-61	11,25,384	14 7	10,57,567	15 9	67,816	14 10

This last balance is due to the famine.

The records having been destroyed during the mutinies, I am unable to give an account of the collections of the past twenty years ; the above return is all that can be furnished from this Office ; but it is well known that the demand was always punctually realized, until the year of mutiny, and subsequently one of famine, threw the district into disorder.

The only mistake I can discover which Messrs. Thornton, H. Elliot, and C. Plowden committed was, disproportionately taxing the industrious communities of Jâts. As a rule, the past settlement was moderate and gave satisfaction ; and this is plainly proved by the rare occurrence of coercive processes.

The next criterion is the number of voluntary or compulsory transfers of property.

* *Vide* Transfer Statements for Bhooma, Bugra, and Shamlee. Although in some pergunnahs* transfers have been rather numerous, I have never heard that severity of land tax was the primary cause ; generally speaking, other causes have been at work, as in the case of the Syud proprietors, amongst whom these mutations have been most frequent.

The Syuds are the descendants of the old country gentry ; they lead an idle life, and though their numbers have greatly increased, out of all proportion to the minute quantity of land from which they now draw subsistence, they cannot be induced to curtail expenditure, and are deeply involved to the money-lenders. On the Collectory side under Act VIII., 1859, I have been propping up the chief Syud families ; but the day of reckoning must come, sooner or later, and in the meantime they are decaying rapidly (see the number of transfers in Pergunnah Bhoomah Sumbulhaira ; a half of the pergunnah has changed hands).

2. It will be unnecessary for me to describe the geographical features of the district, as Mr. Keene has so well done this in his report, which I have already submitted to the Board. They have also been mentioned in the Pergunnah Reports of each of the Settlement Officers.

3. Disputed boundaries were few, as will be seen from the following statement :—

Total number of boundary cases.	Amicably settled by compromise or otherwise.	Disputed boundaries settled by arbitration.
172	128	44

All disputes were settled according to the principles laid down in paragraphs 8, 9, 10, 11, 12, 13, &c., "Directions to Settlement Officers." A list of disputed boundaries having been prepared, the contending parties were called upon to adjust their differences within seven days; failing to do this, arbitration was resorted to, as directed in Regulation IX., 1833, Sections 5, 6, 7. As a rule, there was no difficulty found in deciding these disputes; the demarcation of the previous settlement was generally maintained throughout the district. Judging from the paucity of appeals, the decisions have given general satisfaction, and it is believed they will stand the closest scrutiny in the Civil Courts.

4. The survey by Ameens and Putwarees was more than half finished when I assumed charge of the district in March, 1862. The *modus operandi* is thus described by Mr. Colvin, Assistant Collector, Settlement Department, who took the principal share in this, as indeed in other duties connected with the revision of the settlement :—

"The measurements were commenced first in Moozuffernugger, Bughra, Shikarpore, Boorhana, Churthawul, Thannah Bhowun, Jhinjana, Bidowlee. This was in October, 1860. To each pergunnah was appointed a Moonserim on Rs. 30, and three Ameens on grades of Rs. 15 and Rs. 12. The pergunnah was divided into three compact parts, each Ameen taking one. The four first pergunnahs were made over to Nanuck Chund, Deputy Collector, for superintendence; the last four to Mr. Colvin, Assistant Collector. Immediately under these officers were the Peshkars of the Tehseels of Moozuffernugger and Thannah Bhowun respectively.

The actual measurement was carried on by Putwarees, or where these by ill-health or other cause were incapacitated, by Gomashtas paid by the Putwarees. The Ameens inspected the measurements while in progress. Not more than six villages were under measurements at the same time under any one Ameen. When a village was measured, the Ameen signed the map and papers, and made them over to the Moonserim. The Moonserim tested at 20 per cent. of the fields. After he had affixed his signature, the papers were made over to the Peshkar. He tested at 10 per cent., and made over the papers to the officer in charge. He finally tested the papers. The current work was also inspected by him as he moved about the district. These eight pergunnahs were completed by September, 1861.

The Pergunnahs of Gordhunpore, Poor, and Bhookurheree were commenced in January, 1861, and finished in October, 1861. They were superintended by Nanuck Chund; and all three pergunnahs were entrusted to one Moonserim and nine Ameens. When the Deputy Collector left, then Mr. Keene took over his four pergunnahs, which were finished by June, 1861.

In October of 1861, Kyranah was commenced by Mr. Colvin, with the Peshkar, Moonserim, and three Ameens. The arrangements were the same as in the other pergunnahs. In this Tehseel the Peshkar was quite useless. The measurements were finished in February, 1862. In that month Shamlee was commenced, the

Kyranah staff being transferred to it. In February, 1862, the measurements were started in Kandhla,—three Ameens being appointed to it. The Moonserim appointed in Shamlee looked after Kandhla also. The measurements in these two pergunnahs were completed in April, 1863.

In October, 1861, Sumbulhera was commenced under Nanuck Chund, Deputy Collector, and finished in August, 1862. In February, 1862, Jowlee and Khutowlee were commenced under him (three Ameens per pergunnah, and one Moonserim for the whole, being his staff). In April these pergunnahs were completed simultaneously with Kandhla and Shamlee.

For the “abadee,” or town measurements, one Ameen was appointed to every two pergunnahs. His work again was tested by the Peshkar and superintending officer. This work was not carried on simultaneously with the field measurements, as it was thought it would delay them, and consequently the assessment. They were commenced in October, 1861, and finished by June, 1863. The large towns were measured by Gomashtas (chiefly Ameens who had been reduced), the villages by Putwarees.

When it is said that there were three Ameens to each pergunnah, and one Moonserim, it must be understood that as the villages were measured Ameens and Moonserims were reduced. Hence in February, 1861, Bidowlee and Jhinjanah were brought under one Moonserim, and Thannah Bhowun and Churthawul under another. The Putwarees as a rule shirk the measurements, partly from being unskilled and unable to keep up to time, partly from being hurried, and physically unable to measure more than one village at a time, and partly because their other duties draw them away from the work. If they are allowed, they always appoint a Gomashta,—an expense which I take it is provided for in the village “bâch.”

5. During the progress of the measurements weekly statements of business done were required from the Ameens and Moonserims. A standard of daily work being fixed, the Ameens were expected to keep up to it; if they exceeded, well and good, but if they fell short, pay was stopped until the deficiency was worked up. This is the only effectual way to keep these officials up to their work; otherwise there is no hold on them, and the measurements might have been protracted *ad libitum*. The work was thus distributed,—one Ameen had charge of four chains, each worked by two Mirdhas, who measured 30 pukka beegahs per diem; or for four chains 120 pukka beegahs. In towns, one Mirdha only was told off to each chain, and he was required to measure 35 houses; and about four chains were under the charge of each Ameen, who prepared the Khusrahs and Shujrahs of 140 houses per diem: this was the utmost that could be done by one Ameen; frequently he fell short of this standard, and had to make up the deficiency by extra labor.

6. Where the Ameens have mostly erred is in the description of soils and crops. I have generally found that they have put down more “meesun” lands than properly belong to that class. It is curious that they should have committed this error; for being temporary servants of not irreproachable integrity, it would not have been surprising had they connived with the land-holders to lower the kind of cultivation. In most of the pergunnahs of this district we have had very good means of testing the amount of irrigation by comparing the Ameens’ returns with the “Khusrahs” of the Canal Department; when discrepancies have been detected, strict enquiry has been made as to the cause of the difference, and the error rectified.

7. *Assessments.*—I have already so fully detailed the data upon which I have made my assessments in the reports attached to each pergunnah,* that it is needless to repeat them in this place. My Assistants have pursued the same course, making a separate report for each pergunnah when completed.

* See Moozuffernugger especially.

The following demi-official note, which I had the

honor of addressing to the Board during the progress of the revision of the settlement, will show the part I took as Collector in supervising the work of my Assistants. The Board were pleased to approve of the principles I there laid down ; and I believe I have faithfully acted up to them.

“ There can be little doubt that the superintendence expected by Government from the Collector is of the most active kind ;—from the time the measurements are commenced, till the completion of the assessment of the records of rights and the final report, nothing should escape the notice of the Collector.”

In the Seharunpore Circular, Appendix No. XX., “ Directions to Settlement Officers,” the Government always addressed the Collector—*vide* paragraphs 8, 35, 36, 37, &c.;—thus clearly showing who is the chief responsible authority. Certain sub-divisions of the district are entrusted to the Covenanted Deputy Collectors, who should watch narrowly the survey operations of the Moonserims, Ameens, and measuring parties, and insist on a certain amount of weekly progress, such as has been fixed upon in this district. Celerity has not been desired at the cost of accuracy ; but it has been considered necessary to fix a standard of daily work which it is known can be efficiently performed with ordinary industry. The Moonserims, Tehseeldars, and Uncovenanted Deputy Collectors should scrutinize the measurements of the Ameens and Putwarees, and report their proceedings to the Covenanted Deputy Collectors. The Uncovenanted Deputy Collectors are under the immediate direction of the Assistants, Settlement Department, for that part of the district only for which the Assistant is held peculiarly responsible ; and all are subject to the control of the Collector of the district, who will himself take charge of a sub-division as much as the Covenanted Assistants ; for instance, in Moozuffernugger, the Collector has entirely settled six out of seventeen pergunnahs,—the remaining eleven being divided between two Assistants. The Assistants cannot hear appeals in any shape from the Native Deputy Collectors ; they can only direct and supervise under the control of the Collector. All appeals and revisions of orders must necessarily be referred to the Collector. Should a Collector choose to call for any proceedings from the Assistants, and issue any *interim* order, he is quite empowered so to do ; and he will generally return the proceedings for the perusal of the subordinate officer. Thus, in the matter of long-outstanding balances, the Collector alone can fix at the time of settlement how much may fairly be written off to the head of “ Unrealizable,” and how much shall be considered as recoverable.

The Assistants, however, can be advantageously employed in examining these balances and reporting to the Collector. Indeed, it would be difficult to say to what part of the duty of the revision of the land revenue the Collector’s interference does not extend ; and supposing that it is exercised with judgment, and with a due appreciation of the current fiscal laws, it must tend to the benefit of the public service. It is erroneous to suppose that the Assistants appointed to the Settlement Department are in any way exempted from the supervision of Collectors of districts ; for the time being, they form part of the subordinate establishment of the district, just as much as the ordinary Deputy Collectors appointed under Regulation IX., 1833.

The measurements and adjustment of boundaries being satisfactorily concluded, we come to *Assessments*. First of all the Collector should, in concert with his Assistants, decide as to the proper system of preparing *rental estimates*,—that is, of ascertaining the rental, or that amount of the rents of an estate which reaches the land-holder. Having laid down formula and agreed to the general course of enquiry to be adopted,—what is reliable and what unreliable data,—the Assistants should be directed personally to visit each village separately, and to record full pertinent remarks in a Pergunnah Book prepared for that purpose. Attention should be directed to the following points :—

The character of the soil and of the crops produced.

The character of proprietors and tenants.

Means of irrigation, depth of water, &c.

The rates of the old jumma on the cultivated and malgoozaree area, as compared to the neighbourhood, and to similar classes of estates.

The prevailing rents, past fiscal history.

How the revenue has hitherto been realized.

Any coercive processes, any transfers, and to what causes to be ascribed. Then a note with the different rental estimates produced by the methods approved of in consultation ; also the Putwarees' rentals for five years at least.

Statement of the proprietor as to his rental. If great variance, show cause, and the standard to which it is proposed to adhere. In juxtaposition place "Douls," or estimates of the Pergunnah Officers, and of the respectable landlords.

The proposed jumma—at what rate does it fall.

If high or low, explain the cause of variance.

Having done this "Mouzahwar," and obtained all the information that is possible by holding free communication with the people, the Assistant will submit his Pergunnah Book to the Collector, who will either record his remarks therein, or, in consultation with the Assistants, will approve or make any alterations as may seem requisite. It would be useful to annex a Pergunnah Skeleton Map, with the rates of the old jumma on the cultivated and malgoozaree area dotted down in red ink, adding a note of the rates of the neighbouring pergunnahs.

Also another map, similarly prepared, with the rates of the proposed jumma, Mouzahwar and Pergunnahwar. As soon as the Collector's sanction has been obtained, the jummas to be avowed, and any recusancy or difficulty in obtaining the signature of the Malgoozars, to be reported to the Collector, who will instruct the Assistant how to proceed. The Covenanted Assistants should be encouraged to consult the Collector whenever any difficulty occurs.

In this way it is anticipated the work will be most effectually done and controlled.

The supervision of the preparation of the record of rights throughout the district will of course devolve upon the Collector, who will not at the same time attempt so inusory a task as to grasp more than he can intelligently perform, lest, whilst endeavouring to effect an impossibility, he should in reality exercise but a slovenly direction over his subordinates. Collectors will for the most part be only too glad to call in the aid of intelligent Assistants, and, by a proper sub-division of labor, eventually complete the onerous responsibility of the re-settlement of the districts confided to their charge.

Assistants will have an opportunity of reporting separately for each pergunnah, and their exertions will be duly appreciated by the Collector when he sums up his report for the whole district. Such is, I believe, a summary of the manner in which a revision of the settlement should be carried out in all its branches.

8. My predecessor, Mr. H. G. Keene, assessed Gordhunpore, Boorhana, and Shikarpore ; and the report* for these pergunnahs was sent to the Board in March, 1862.

* It was returned, and now re-submitted.
Pergunnahs Moozuffernugger, Bughra, and Poor Chupar have been assessed by me.

Mr. Colvin—Bidowlee, Kandlah, Kyranah, Shamlee, Jhinjana, Thannah Bhowun, and Chirthawul. The report for Pergunnah Bidowlee was sent to the Board at the same time as Mr. Keene's.

Mr. Grant—Bhookurheree, Bhoomah Sumbulhaira, Jowlee, Jansuth, and Khutowlee.

In all, seventeen pergunnahs.

The demand of the past Settlement was Rs. 11,19,839-13-7; the revised jumma is Rs. 11,19,127-10-0, exclusive of Rs. 10,094 assessed on life rent-free tenures. If this be added to the revised jumma, then the total demand for the district will amount to

Rs. 11,29,221-10-0, or a fall of Rs. 712-3-7;* with
* On Khalisa only.

which if we compare the expenditure of Rs. 1,56,768, the cost to Government in revising the settlement during the past three and a half years, financially the measure might appear to pure economists to be a failure. It has, however, been the endeavour of myself and subordinates to tax the people at 10, instead of 13½, shillings in the pound; and this has been effected after the most elaborate and careful enquiry. Where the tax pressed, owing to severity of demand and to natural causes of deterioration, and where classes of agriculturists were unequally assessed,—as in the case of the industrious Jâts,—relief has been given. On the other hand, where villages have had their assets doubled by the introduction of the canal, or cultivation has largely improved, Government has justly come in for a moiety of the increased profits. One of the main causes of the decrease in the total demand is due to the present state of the Pergunnah of “Bidowlee,” which is occupied by that depraved class, “Goojurs.” These people prefer thieving and grazing herds of buffaloes, to pursuing the laborious occupation of agriculture.

I am almost inclined to propose that the settlement of this pergunnah be revised after ten years, the privilege of a permanent settlement being extended when the cultivation is brought up to an equality with the neighbouring pergunnahs. Mr. Colvin, who assessed this pergunnah, does not think that any good would be derived from limiting the period of settlement.

This subject will be dealt with more fully at the end of this report.

	Total area in acres,	Cultivated.	Culturable.	Maafee.	Waste.	Remarks.
Former Settlement, Pergunnah Bidowlee ...	58,432	28,451	Old, 15,685 New, 3,523	2,521	8,252	The culturable area is within 657 acres of the cultivated area!
Present Settlement, Pergunnah Bidowlee ...	60,442	23,270	Old, 16,734 New, 5,879	2,020	12,539	
Increase ...	2,010	...	Old, 1,049 New, 2,356	...	4,287	
Decrease ...	...	5,181	...	501	

In this pergunnah alone there has been a fall in the jumma of Rs. 8,780-3-9; while the revised demand per acre (malgozaree) is Rs. 0-11-4, and per acre cultivated Rs. 1-6-8. This is a state of things which hardly justifies one in proposing that the present light jumma should be made a permanent settlement. Indeed, this would be simply a premium on idleness, inducing others to follow the same course, in the hopes of getting the demand permanently lowered. The example of these vicious Goojurs is already most infectious. To have them under proper control, there should be an European Deputy Collector, with Joint Magistrate's powers, stationed at Shamlee or Bidowlee. In order to raise the cultivation of this pergunnah, and to bring it to a flourishing condition, I have proposed that “Baooreas,” or wandering gipsies, be located in it; land can be given them on very cheap terms; they would prove formidable opponents to the “Goojurs” (*vide* my report to Commissioner, No. 77, dated 1st September, 1863). Mr. Colvin has given his reasons at length for lowering the jumma; and to that report, in the possession of the Board, I beg to refer. Also see Mr. Colvin's Minute on Permanent Settlement.

9. In the unirrigated pergunnahs—such as Churthawul, Bugra, Bhoomah Sumbulhaira—the past assessment even at two-thirds was too high. Transfers by private sale and by order of Court showed a severity in the demand, and of course at half assets it had to come down considerably. In other pergunnahs—such as Boorhana, Shikarpore, Khutowlee, &c.—the industrious Jât communities had been very much over-taxed,

merely because they produced more than their neighbours; no allowance being made for the outlay of capital. Then, again, the famine following upon the mutinies, seriously crippled the resources of all the zemindars in pergunnahs where water was deficient.

All these causes have combined to lower the past jumma,—a result which, under the circumstances, was unavoidable.

10. *Record of Rights*.—Next to a moderate assessment, I look upon a careful and accurate preparation of the record of rights as the most important part of the revision of settlement. With this view, the most minute rights affecting the welfare of a vast population have been accurately registered; numberless old and fresh disputes decided; and the transfer of landed property made an easy process.

The records of 1,105 villages have been examined and put upon a true basis. Even had double the time been expended in accomplishing so vast a work, the State would have benefitted immensely. It requires no argument to prove that, without a proper registration of landed property, the very best assessment must fail; and the efforts of the Collector should be unceasing towards keeping up these registers; for, with the rapid increase of the population, facts are altering every day; and what is now correct will, in the course of a few years, be quite inapposite and untrue.

The Tehseeldars, Canoongoes, and Putwarees require constant prompting, or they let the records fall into arrears; making the re-casting of them a difficult and tedious operation.

11. In compiling the records of this district, I have met with some curious anomalies. For instance, the “shurh nukdee” tenure, which gave all the profits to the cultivators, to the exclusion of the proprietors of the land. The former had to pay 18 per cent. only above the jumma to the proprietors, and nothing else except the village expenses. For example, the cultivators of the village of “Bhynsee,” Pergunnah Khutowlee—one of the best villages in the district—paid the Nawab of Kurnaul, under the old settlement, Rs. 5,986-1-0, being 18 per cent. added to the Government demand, village expenses included. This tenure has been cancelled, with the sanction of the Government, North-Western Provinces. Under the revised settlement, the demand has been assessed at Rs. 4,000, and under the operation of Regulation XIV., 1863, the rental has been raised to Rs. 6,952-15-0,—so that the profits of the proprietors are now Rs. 2,752-11-0, where formerly they amounted only to Rs. 887-7-6, and “mulba,” or village expenses, Rs. 237-9-6; total, Rs. 1,126-1-0. The injustice of limiting the landlord’s profits to so small a sum, although he had to make good the revenue in bad as well as fruitful harvests, appeared to me so manifest that I lost no time in reporting the matter to the Board of Revenue; and, as I have said above, obtained sanction to abolish throughout the district what has been called “shurh nukdee.” All the influential zemindars have personally thanked me for the part I took in restoring to them their natural position. They now say that a zemindaree is worth having, whereas under the old regime the proprietors were nothing more than annuitants, without any influence in the management of their estates. The cultivators would not allow them to set up a “Choupal,” or Zemindar’s Kutcherry, in the village; and even now, though I have thoroughly explained the views of Government, the hereditary cultivators pretend they do not understand why the responsibility of paying the revenue, *plus* the zemindar’s profits, is not expressly made with them,—i. e., to exclude the landed proprietors altogether. The origin of this absurd and unjust tenure I ascribe to a mistaken leniency towards the cultivators; and the effect of it has been to make them wealthy at the cost of the landlords. Though it may be necessary to secure the cultivators from rack-renting, it surely cannot be to the interest of Government to sacrifice the zemindars to a theory of this kind.

12. In several cases, I observed the Settlement Officers had farmed shares without stating the limit of exclusion, in others farm was made for the period of settlement; and when the original period of settlement had run, the old proprietors petitioned the Collector of the time to restore them. The order to admit them to engagements was granted; but on appeal to the Commissioner—about 1854 or 1853—it was disallowed, because these villages having been transferred from Meerut to Moozuffernugger, the settlement was prolonged for ten years more: the exclusion for recusancy, therefore, lasted thirty years—a most severe punishment for the offence of not engaging to take up what was no doubt thought a severe jumma. Whenever these cases of hardship came before me, I invariably admitted the excluded proprietors, although the farmers tried hard to set up rights of prescription, founded on an arbitrary and illegal act of a Government Officer. Mr. Charles Grant, Assistant Settlement Department, differs with me entirely; he thinks that where the farm has extended, no matter how, beyond the legal period of twelve years, and where the original proprietors have tacitly allowed themselves to be dispossessed by not receiving “Malikana” or compensation during the period of their exclusion, the Settlement Officer has no power to order their restoration; notwithstanding any express stipulation declaring the right of the proprietors to re-entry at the close of the current settlement—a stipulation which Mr. Grant thinks was entered by the Deputy Collector merely as a repetition of some past agreement, illegal in its nature, and therefore not binding on the officers carrying out the revision of settlement. The opinion held by me is supported by the order of Secretary to Government, North-Western Provinces, to Secretary, Sudder Board of Revenue, No. 560A. of 1862.

13. Legally, there can be little doubt that Settlement Officers are not invested with powers to exclude recusants for the period of the settlement 12 years is the limit—*vide* Section 3, Regulation VII., 1822; but then the equity and peculiarity of the case should be considered. Both parties have bound themselves down by acts of the Settlement Officer, who to them appeared invested with plenary powers. Upon the very first opportunity the excluded proprietors pray to be reinstated; the introduction of the canal or some other cause having rendered the estate more profitable and able to pay the revenue. The Commissioner of Revenue, another Government Officer, tells them they must wait ten years more before they can be restored. This period expires, and they are informed that a right of prescription has been growing up against them,—a right which naturally enough appeared unchallengeable, because it had the sanction of authority. In some instances, the stipulation of re-entry was renewed when the Khewuts and Khuteonees were revised before the expiry of settlement, through the agency of Tehseeldars; and yet we are told not to respect these conditions voluntarily entered into! The non-receipt of “Malikana” does not affect the question of re-entry; this is a compensation in lieu of the right to engage; and I take it that excluded proprietors can sue at any time for that portion which comes within the period of limitation; on the other hand, if they choose to let it lapse, that concerns themselves, and no one else.

14. The reduction in the number of Lumberdars, so as to make the office of some importance and worth having at 5 per cent. on the jumma, has proved a most unpopular measure. When a diminution in superfluous numbers has been imperatively called for, the dismissed office-bearers have invariably appealed and claimed the appointment as hereditary. Although, pecuniarily, the old Lumberdars gained nothing, still the office gave to those who held it an honorable position in the village, and the natives of this empire are peculiarly sensitive on points of this kind. The reform, however, was not effected before it had become necessary; for imperceptibly every petty “thoke” and “puttee” had succeeded in appointing its own representative, to the manifest degradation of the office.

15. The Board of Revenue, in their letter No. 30, dated January 18th, 1862, to the Commissioner, Meerut Division, have directed that the charge of “Malikana,”

which is a species of annuity, be converted, if possible, into an equivalent in land, and this double form of payment, where doubtful, be abolished : cases of this kind are very rare in this district. The conversion into land I found to be an utter impossibility ; the zemindars will not part with an inch of ground, even though it be to effect the avoidance of a money compensation. Otherwise the Board's instructions have been fully attended to, as the following table will show :—

No.	Name of Mouzah.	Name of Applicant.	Amount of Malikana according to the old records.	How disposed of.
			Rs. As. P.	
1	Chokra ...	Hurdecal ...	10 0 0	Cancelled, as recipient ceased to receive malikana. 56 Beegahs retained.
2	Kussowlee ...	Omrao, and Souceram ... Zamin Ali ... Ali Hoosain ... Tootail Ali ... Ahmed Hoosain ... Musumat Gheesee ... Imam Ali ... Bundeh Ali, and 5 others ...	56 Beegahs. 9 Biswahs.	
3	Moheeb Alipoor,	Fuzzul Hoosain ... Fyaz-ool-nissa ... Fuheem-ool-nissa ...	Rs. As. P. 5 0 0	
4	Nuglaraieen ...	Ditto as No. 3 ... Rungee Ram ... Gunput Rai ... Rughonath ...	4 8 0	
5	Anchora ...	Dhokul ...	18 Beegahs, 1 Biswah.	
6	Nulvee ...	Mahomed Ali Khan, Raees ... Koojpoorah ...	Rs. As. P. 50 0 0	Cancelled, ditto as No. 1. Ditto ditto. Rs. 104 retained; an equivalent in land could not be arranged. Rs. 7 retained, ditto ditto.
7	Kerarwa ...	Jowala Dutt ...	10 0 0	
8	Sutheree ...	Dewan Singh, Mahajun ...	104 0 0	
9	Mookeempoor Dakhilee Mou- zah.	Musumat Pearcee Begum ...	7 0 0	
10	Hoosainpoor ...	Khair Ali, Gheesa, & 16 others,	50 0 0	
11	Chitoura ...	Muzhur Ali, Disoundi ... Atta Hoosain, and 4 others ...	3 8 0	Rs. 50 retained, ditto. Rs. 3-8-0 retained, ditto. Rs. 5-9-4 retained, ditto. Rs. 21 retained, ditto.
12	Chowgara ...	Casim Ali, and 18 others ...	5 9 4	
13	Nugla kubeer ...	Ali Hoosain ... Mehrban Ali ... Futteh Ali ... Chujjoo ...	21 0 0	

NOTE.—“The difficulties in the way of this (i. e., compromising the claim by the assignment to the original zemindars of a corresponding portion of land, &c.) are that, where there is little or no common land, there is little or no spare land, and that the original zemindar is unwilling to exchange what he conceives to be the dignity of his Malikana, the recognition of a title for the obscurity of a few acres of land, and an abandonment of that title.”—*Mr. Colvin's Settlement Manual.*

16. In the preparation of the Administration-paper, the Khuteonces, Khewuts, and the other documents forming the Settlement Misl, I have spared no effort in making the record as accurate as possible. All attempts at copying one stereotyped form have been avoided. My aim has been to describe every village, however varied may be its features, as it exists, to leave nothing uncertain and debateable, and at the same time not to create new rights. The cultivators, too, have not lost sight of this opportunity to have themselves recorded as hereditary, in distinction from non-hereditary, peasants. The village papers for the past 12 years have materially assisted towards the solution of these questions. Time will show whether we have intelligently performed this part of our duty. In the meanwhile, I beg to claim for myself and my subordinates the merit of continued and assiduous care towards the attainment of this most desirable object. Seventeen thousand cases of all kinds have been decided, and, even allowing that a small percentage of these decisions will be reversed

in the Civil Courts, still the residue shows a considerable amount of litigation satisfactorily disposed of. The Settlement Officers have been sitting daily in open Court, willing to take up and adjudicate the complaints of all parties who considered themselves aggrieved, even after the papers have been filed, and at considerable inconvenience to ourselves. Thus the great mass of the

* NOTE.—17,715 cases of all sorts have been decided, and 429 appeals were decided in my Court.

agricultural classes, numbering about 280,872, have had a patient hearing; and if any disputed rights still remain, the fault lies with the parties who failed to prefer their claims.*

17. The establishment of Putwarees in this district has been thoroughly revised. New compact circles of charges have been formed, each containing contiguous mouzahs; or where the area of a mouzah is large, and its jumma considerable, it has been made the charge of a single Putwaree, with a "Gomashta" or two, as the case might be. As far as possible, I have endeavoured to retain the old order of things where the charge did not conflict with the leading principles of contiguity and moderate size, it not being desirable to remove experienced village accountants, who were suited to the wants of their chief masters, the zemindars.

The salaries of the Putwarees average about Rs. 150† per annum, are collected by the Tehseeldars, paid quarterly in their presence, and receipts ("Kubzool-wusool") forwarded to the Collector. This has been hailed throughout the district as a great reform, as formerly the zemindars kept the Putwarees six months, and often a year, out of their pay. The Putwaree now feels that he can be a little independent, and can afford to speak the truth occasionally. Great watchfulness will be required to keep this establishment in good order; for nothing is more common than to find the Putwaree making annually copies of the old settlement records, without entering the intermediate changes that have occurred,—the Tehseelee officials failing to check these gross errors. A list of these revised charges (or "Hulkabundees") will be found arranged pergunnahwar among the annexures of this report; they have all been arranged with great care, and will, I hope, meet with approval.

† There are three grades, according to a recent Circular of Board of Revenue—*vide* annexures.

18. Mr. Colvin has suggested that Putwarees should no longer be required to keep up Paper No. VII. of the "Huftganah" Returns, showing the mutations of property. For this there are two reasons: 1st, it puts a great deal too much power in the hands of these village accountants, thereby causing extensive corruption; 2nd, in practice it has been ascertained that the registers of mutations are seldom kept correctly, notwithstanding the supervision of Tehseelee officials, and the various stringent orders issued from time to time by the Board of Revenue, and by local officers. In lieu of the present very imperfect system, it is proposed to keep a register of all transfers of property at the Tehseelee, the Canoongoe being held responsible for this duty; and in order to ensure the correctness of this highly important return, affecting valuable property all over the district, to enact certain penal clauses, making it compulsory upon all parties to register transfers, mortgages, &c., of every kind, at the Tehseelee office; failing in this, the transferees to be incapable of suing either in the Revenue or Civil Courts.‡ Such a measure would put an end

‡ The new Registration Act was passed since the above was written.—S. Martin.

to the jobbery that now takes place on the part of the Putwarees, who are represented as being very corrupt officials. So much weight is attached to the evidence of the Putwarees in the Revenue and Civil Courts, that I think it would be conducive to public justice to break the power of these people, as is being done in the settlements in Oudh. The outcry against the Putwarees is almost as great as against the exactions of the money-lenders. The evil is now assuming such magnitude that I opine legislative interference is urgently required.

19. I think it is to be regretted that, under the provisions of Regulation VII, 1822, the powers of a Collector in hearing appeals from the Covenanted Assistants

in the Settlement Department should have been so limited. Everything has to go to the Commissioner, and thus that insight into the practical working of his subordinates is lost to the Collector, who is nevertheless held responsible for the proper conduct of business in all its branches. The Assistants are junior officers, selected for efficiency, and no doubt do their work well; still it was hardly necessary to invest them with the full powers of a Collector in order to make their decisions respected by the Courts. The experience of the Collector would surely have been of great utility in arresting the mischief likely to ensue from rash or hasty decisions of the Assistants. However, I must say in this district I have received the cordial co-operation of my Assistants, Messrs. Colvin and Grant, both excellent officers; we have sometimes differed in opinion, but as a whole have worked with hearty good-will.

20. *General Remarks.*—Attached to this report will be found a statement of outstanding balances recommended for remission. These balances are the legacy left by the famine. All that could possibly be collected without encroaching upon the resources of the zemindars has been done; to push the demand any further would only result in distress, and might endanger the future revenue. It is discouraging to keep these items of balance hanging over the heads of the malgoozars; it leads to improper interference on the part of the Tehseelee officials, and therefore it is advisable that they be cleared off as early as possible. The difference between the old and new jummas arises from the reduction in the settlement at half assets. These sums appear on our "Hal Toujee" as nominal; the sanction of authority is required to expunge them. As soon as this is done, our balance-sheet will become blank, and, with ordinarily favorable seasons, we may henceforth expect to keep it so.

21. It is my pleasing duty to report satisfactorily of both the Covenanted Officers engaged in the revision of the land revenue. Mr. Colvin especially deserves every praise for the able manner in which he has handled the subject. He has been present in this district throughout the settlement, and has done by far the major part of the duties,—all to my entire satisfaction.

I beg to recommend this most promising officer to the favorable consideration of the Board of Revenue.

Mr. Charles Grant, Junior, has settled the eastern portion of the district in a manner which proves him to be a thorough master of the details, and in every way a valuable Settlement Officer. Both Mr. Colvin and Mr. Grant have submitted Pergunnahwar Reports, to which I would draw attention.

Of the Uncovenanted Officers, Rae Nanuck Chund and Mirza Vicar Ali Beg are laborious and intelligent officials. The amount of work they have disposed of is considerable, and has been efficiently executed. Their integrity is as unquestionable as their assiduity.

The Tehseeldars and Canoongoes in this district are far from efficient. Had the Native Deputy Collectors not been competent, I should have found it most difficult to complete the settlement.

22. From the time I took charge of this district to the present moment, I have narrowly watched every stage of this settlement; and I trust the Board will see that I have lost no time in its completion. I have, of course, had many and various other duties to perform,—such as the general supervision of the administration of the affairs of this zillah, both in criminal and fiscal matters; the assessments of Income Tax; the new Excise system, &c. The heavy criminal cases have also been entirely in my hands; but my chief attention has been turned to the settlement as the most important duty. A few years will determine whether I have judiciously revised the land tax. Nothing has yet occurred to shake my belief in the justice and moderation of the assessments. Calamitous seasons, or any permanent injury to either the Ganges or Eastern Jumna

Canal, would of course be immediately felt ; but these are adversities which no Settlement Officer can anticipate or provide for when they do occur : * exceptional measures must be applied to cure the evils of calamitous visitations. Under the blessings of Providence, I look forward with great interest to a long course of prosperity for the agricultural classes residing in this flourishing district.

23. Before closing this report, I must refer briefly to those portions of the district to which the permanent settlement might be extended without injury to the State, and also to those which from peculiar circumstances are scarcely fit to be permanently assessed. The following pergunnahs are unexceptionable, and might be permanently settled :—

- | | |
|---------------------|---------------------|
| 1. Moozuffernugger. | 7. Shamlee. |
| 2. Bughra. | 8. Boorhana. |
| 3. Poor Chuppar. | 9. Shikarpore. |
| 4. Churthawul. | 10. Khutowlee. |
| 5. Thannah Bhowun. | 11. Jowlee Jansuth. |
| 6. Jhinjana. | |

The next pergunnahs are those which have exceptionable parts,—*e. g.*, all those villages liable to fluvial action from large rivers, such as the Ganges and Jumna.

Under the Board's recent Circular, portions of villages liable to fluvial action have been separately marked off. (*Vide* Circular, Sudder Board of Revenue, No. 29, dated 7th December, 1864.)

12. Kyranah.
13. Kandhla.
14. Bhoomah Sumbulhaira.
15. Bhookurharee.

The remaining two pergunnahs—16, Bidowlee, and 17, Gordhunpore—are quite peculiar. The first has been referred to in paragraph 8 of this report ; and after due deliberation with Mr. Colvin, who assessed the pergunnah, I must say there are not sufficient data for recommending a permanent settlement.

24. Mr. Colvin states that Bidowlee is a pergunnah inhabited for the most part by Goojurs, or by castes of a similar kind. The greater part of the land is owned by these men, and almost the whole cultivated area is cultivated by them. Owing chiefly to their indolent habits, and their indifference to agriculture, the pergunnah is in a very backward state of cultivation ; more than one-half is uncultivated. Hence the Government demand has in the present settlement fallen at a very light rate. It was believed impossible—unless the ownership and cultivation of the greater part of the pergunnah were transferred to other hands—to impose other than a comparatively trifling demand. The assessment is perhaps three-fifths of what—*ceteris paribus*—it should be. Under these circumstances, it is questioned whether the present revised assessment should be declared permanent. There are, I think, two considerations,—the one, whether Government, consistently with a due regard to its rights and interests, should render permanent so exceptional an assessment ; the other, whether a tax so relatively light with regard to other land-owners can be justly declared permanent. With regard to the first, the present assessment is no doubt very light ; but is there any reason for supposing that a temporary settlement would enable the Government hereafter to increase the demand ? The result of the last temporary settlement has been a reduction of Rs. 13,000 in the demand. I know of no instance in point. The Goojurs in Kandhla have certainly increased their cultivation, but they are otherwise placed, the canal irrigating every inch of their soil. Whether a light assessment without extraneous advantages will have a similar result is, as far as I know, matter only of conjecture. A light assessment may make agriculture more profitable than cattle, but not sufficiently profitable to destroy old habits and make these men industrious. Hence I think it would be practically inoperative. Under this view, a temporary settlement would bring us no nearer raising the demand, while it would hinder benefits which permanency can alone fully guarantee.

25. Secondly, as regards the relative fairness of the demand. If the Bidowlee assessment is declared permanent, there is no doubt that the average on the Bidowlee land-holder, after eliminating all disturbing elements, will be far less than on his neighbours in the adjacent pergunnahs; but it has already been seen that there is no ground for supposing that a temporary settlement would reduce the inequality, allowing that the inequality might, under a temporary settlement, be reduced. Does this consideration outweigh all others? If among such a people it could be hoped that a temporary settlement equalizing the land tax, combining with the advantages of a permanent settlement, could be secured, there could be no objection to a temporary settlement. But this being highly improbable, is the absolute equality of the incidence of the tax to be preferred to the chance of civilizing and reforming a thieving and black-guard population? As regards Government, I certainly think not; nor, on closer inspection, as regards the people. An honest and industrious man paying Re. 1 per acre may feel indignant at the rogue paying 10 annas permanently; but, after all, it must be the interest of the honest man to live unmolested by the malpractices of the rogue. It surely cannot be to the advantage of any one to make the indolent pay an acreage of 13 annas, liable to enhancement, and retaining his predatory habits." *

I have endeavoured to place before you both sides of the argument; it is for superior authority to determine their relative value.

26. Pergunnah Gordhunpore, like Bidowlee, only in another way, is peculiarly situated; a number of estates have been destroyed by percolation, either from the Solainee River or the Ganges Canal. Mr. Keene assessed this pergunnah before I took charge in March, 1862; and in January, 1864, swamp had increased so much, I was obliged to revise the new assessments. In a note attached to what is called the Choel Circle—*vide* No. II. Statements—I have given my reasons for the large reductions upon Mr. Keene's proposed jummas. There was no help for it: the demand was not realizable upon these estates; and in the remarks attached to each village I have suggested that these nominal jummas should be revised quinquennially, as in cases of alluvion and diluvian. Annexed to this Report will be found a list of these swampy ("Choel") estates, which have been handed over to the Canal authorities to drain,—*vide* correspondence closing with Collector's letter No. 235, dated 29th December, 1863, to Commissioner, Meerut.

27. List of villages liable to fluvial action :—

Pergunnah.	Mouzah.	Former Jumna.			Present Jumna.			Remarks.
		Rs.	As.	P.	Rs.	As.	P.	
Kyranah	Mamour	90	4	0	120	0	0	Both the Jumna and Ganges Rivers are so capricious in their action, so violent in floods, that it is more than probable many of these estates will hereafter come under revision.
	Muvee	215	0	0	350	0	0	
	Rana Muzra	2,700	0	0	3,000	0	0	
	Nugla Raen	584	0	0	484	0	0	
	Koondala	950	0	0	750	0	0	
	Jellalpoor	310	0	0	310	0	0	
	Ramurra	1,359	0	0	1,359	0	0	
	Sainputt	647	0	0	450	0	0	
Kandhla	Easpoor Shairoo	365	0	0	477	0	0	
	Ditto Dhunsingh	608	8	0	481	0	0	
	Pokapoor	150	0	0	225	0	0	
	Busee	605	0	0	605	0	0	
	Dhoondoo Khaira	2,560	0	0	2,000	0	0	

* NOTE.—"Villages belonging to such persons (Goojurs, Mewatees, and Mhaics) will generally be found poorly cultivated, nor ought an assessment proportionate to the capability of the soil to be fixed upon them. If the assessment be too heavy, the progress made in the moral reclamation of the people cannot but be slow."—*Directions to Settlement Officers.*

Pergunnah.	Mouzah.	Former Jumma.	Present Jumma.	Remarks.
		Rs. As. P.	Rs. As. P.	
Bhoomah Sumbulhaira,	Gaoree	2,162 0 0	3,000 0 0	Formerly these five mouzahs paid one jumma of Rs. 1,616; in the present settlement they are divided. From 1270 Fuslee to 1279 F., to close of set- tlement.
	Rampoor Tokra	39 0 0	35 0 0	
	Gokulpoor Cheepa	100 0 0	100 0 0	
	Kumooowala	1 0 0	1 0 0	
	Jullalpoor Kazee	1 0 0	1 0 0	
	Nizampoor Khola	14 0 0	10 0 0	
	Khanjehanpoor	59 0 0	120 0 0	
	Dhurumpoora	...	300 0 0	
	Lalpoor	...	320 0 0	
	Reherwa	...	275 0 0	
	Hunsawala	...	285 0 0	
	Hoteewala	...	150 0 0	
	Khaira Mujaidpoor	425 0 0	600 0 0	
	Hoosainpoor Khadir	1,992 0 0	1,450 0 0	
	Subeerwala	4 0 0	5 0 0	
	Khuruk Bailee	12 0 0	10 0 0	
	Bailee Nouburamud	...	10 0 0	

Besides these villages bordering on the Ganges River, the whole of the khadir may be said to be in a very primitive state; but I doubt if these estates are ever likely to improve much: the population is thin, and in the rains the land is much flooded. To the proprietors, a temporary settlement would be very discouraging—so Syud Hoosein Ali Khan says; but Government cannot afford to throw away future revenue realizable from increased cultivation.

Bhookurhairee	Inchawala	98 0 0	98 0 0	
	Ferozepoor	280 0 0	400 0 0	
	Ladpoor Luteefpoor	27 0 0	30 0 0	
	Mahmoodpoor Doongar	56 0 0	56 0 0	
	Pehareepoor	25 0 0	25 0 0	
	Mujlipoor	461 0 0	460 0 0	
	Hajeeepoor Jehangeerpoor	376 0 0	300 0 0	
	Nooroollapoor	200 0 0	130 0 0	
	Shopooree	52 0 0	30 0 0	
	Agee Khairee	75 0 0	150 0 0	
	Shookurtar	320 0 0	320 0 0	
	Jellalpoor Baira	2,350 0 0	2,700 0 0	

There are villages of the same description in Pergunnahs Bidowlee and Gordhunpore. It is for superior authority to determine whether pergunnahs containing a number of villages liable to fluvial action shall receive the privilege of a permanent assessment.

28. Annexed will be found the A. and B. Outstanding Balances Statements. I have recommended Rs. 30,721-1-11 to be remitted. These balances are due mostly to drought. All that was realizable has been collected; there remain only those items which it would be highly impolitic to attempt to recover, because it would straighten the means of the proprietors. As the Board justly remark, these outstanding balances lead to improper interference on the part of the Tehseelee officials; and the sooner they are disposed of the better.

29. During the currency of the revision of settlement, those villages which were assessed above half assets have been allowed a reduction of jumma. Similarly those estates which were under-assessed have had their jummas raised; but as these items are not sanctioned, it will be necessary to obtain formal authority to adjust these accounts. It is clear that until the revised assessment of the land revenue is approved of by Gov-

ernment, the annual account must be made up according to the old demand, any deficiency or excess being shown separately. Thus, These reductions and augmentations will of course be cleared off immediately; the revised assessments are sanctioned. reductions of jumma up to 30th April, 1865, requiring sanction, amount to Rs. 2,31,161-7-0; excess collected, owing to increase in jumma, and realized during the progress of revision, but not formally sanctioned, amount to Rs. 1,53,623-1-11.

30. I have said before that the total of the land revenue will be Rs. 11,19,127-10-0, and when the life rent-free holdings fall in it will be Rs. 11,29,221-10-0. To collect this there are four Tehseel establishments placed at convenient spots. I am not aware that any alteration is required in their location. There is only one pergunnah that is at all inaccessible in the rains, and that is Gordhunpore. At that season it frequently takes the dāk runners—or rather messengers—three days to pass between Mozuffernugger and Gordhunpore. Even in the month of January of this year I was obliged to make a long circuit by Munglour and Landhora—both in the Saharunpore District—before I could reach the northern parts of the pergunnah: all the ghâts were impassable to men or carriage. Nevertheless I do not see how this pergunnah can be eliminated from the limits of this district. If there had been an officer with full powers placed in charge of a sub-division at Roorkee, I should certainly have proposed to increase his jurisdiction by the addition of Gordhunpore.

31. Among the appendices* will be found the prescribed statements and other statistical information called for by the Board of Revenue; great care has been taken to make these returns as accurate as possible. I have endeavoured to collate information upon all essential points, and to place my propositions clearly before superior authority. I earnestly hope I have succeeded; but if there should be anything wanting, I will do my best to supply the omission.

S. N. MARTIN,
Collector.

By the Circulars marginally noted the Board has ordered the amount of revenue due to canal irrigation to be separately entered in the No. II. Statements. I have made a distinct volume of this account; it will be found among the accompaniments of this Report.

Circular Order No. T., dated 16th July, 1861; also
Circular Order, Board of Revenue, No. 24, dated 25th October, 1864.

Inclusive of canal profits, the jumma for the whole district would be Rupees 11,19,127-10-0.

Exclusive of canal profits, by natural capability, the jumma amounts to Rupees 10,44,297-10-0.

of cultivation, &c., and per head of population.

11.	12.	13.	14.	15.	16.	17.	18.
Former jumma.							
Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	
63,056 0 0	56,598 0 0	...	6,858 0 0	1 4 7½	2 4 3½	1 15 6½	
37,905 3 9	29,125 0 0	...	6,780 3 9	0 11 4	1 6 8	1 5 8	Decrease due to falling off of cultivation.
19,458 0 0	17,217 0 0	...	2,241 0 0	0 8 2	1 1 1	1 4 11	Decrease due to swamp.
75,917 3 6	69,846 0 0	...	5,171 3 6	1 10 3½	1 15 8	1 14 9	
1,06,052 1 0	1,03,301 0 0	...	2,751 1 0	1 14 4½	2 2 1½	2 3 10½	
59,974 9 1	68,442 0 0	8,467 6 11	...	1 5 9	1 10 0½	1 9 9½	
26,362 8 3	21,691 0 0						
56,947 3 6	52,330 0 0	2,					
65,410 1 0	61,257 0 0						
55,244 2 3	57,091 10 0						
47,192 0 0	45,706 0 0						
1,20,316 3 0	1,20,067 0 0						
49,571 12 3	52,307 0 0	2,					
65,913 14 0	66,311 0 0						
56,152 7 7	58,578 0 0	2,					
53,507 7 0	60,770 0 0	7,					
1,00,759 1 5	1,11,410 0 0	10,					
11,19,839 13 7	11,19,127 10 0	35,					

* Actual decrease by revision, Rs. 712-3-7 over the whole zillah; but a very considerable increase if the difference between a half-asset and two-thirds jumma be considered. In addition to the above, Rs. 11,493 has been acquired by the Permanent Settlement; and Rs. 10,094 will gradually fall in for life maddies.

S. N. MARTIN,
Collector.

Approximate Estimate of the amount of Revenue for the whole District due to the influence of Irrigation from Canals.

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
District.	Number of villages irrigated.	Area under Canal irrigation.	Former aggregate jumma of these villages.	Revised jumma.	Increase.	Portion of increase attributable exclusively to influence of Canal.	Number of villages injuriously affected by Canal.	Former jumma.	Revised jumma.	Net gain to the District from the influence of Canals.
Mozuffernugger	531	1,85,224	5,88,533	6,42,077	53,544	74,830 By second estimate, under orders of Senior Member, Board of Revenue.	19	15,138	12,913	Ra. 72,605 After deducting a sum of Ra. 2,225, properly due to deterioration from Canal.

This Estimate is an approximation only to the truth; but I have little doubt in my own mind that the Canal really produces more than Ra. 74,830 of revenue. Canals are now a *sine qua non* to those villages which have once used the water.

S. N. MARTIN,
Collector.

An account of the origin and subsequent history of the Syud families in the District of Mozuffernugger ; translated from the Vernacular, by R. J. Leeds, Esquire, Assistant Collector.

THE settlement proceedings in Mozuffernugger having been brought to a conclusion in 1864, under the direction of S. N. Martin, Esquire, Collector, by his order, and with a view to the preparation of the final report, an enquiry took place into the genealogy and present circumstances of the twelve Syud families, who are for the most part residents of Pergunnahs Khatowlee, Mozuffernugger, Jhansuth, Bhokheraeree, &c., in this zillah.

In obedience to that order this chronological account has been compiled. It has been taken as far as possible from the old biographers, and from the reports of those at present living who are cognizant of the facts of the case.

The origin of the arrival of the Syuds in this country and in this zillah is shown to be after this wise :—Syud Abdul Fera, the ancestor of this family, was an inhabitant of one of the towns in the vicinity of Bagdad. In the year of the Hejira 652—corresponding with A. D. 1250—Sultan Halaku Khan killed Mustasim Bila, the Sovereign of Bagdad, and possessed himself of the whole of Bagdad, together with Persia and Arabia ; and, through his tyranny and oppression, so great a change took place that Syud Abdul Fera, at the time when Nasir-ood-deen, the son of Shums-ood-deen Altamash, was Emperor of Dehli, came into this country with his twelve sons, and remained here until the time of Secunder Lodi, when he received news of the death of Halaku Khan, and formed the intention of returning to his native land. By command of the Emperor he left four of his sons—Syud Daud, Syud Abul Fazl, Syud Abul Fazail, and Syud Nazim-ood-deen Hussain—in the Imperial service, and returned with the remaining eight to his own country.

SECTION I.

An account of the places of abode chosen by each of the four sons of Syud Abdul Fera.

After the return of Abdul Fera, Syud Daud made choice of the village of Tainpoor as a place of residence ; Syud Abdul Fazl, of Chathanoor, Syud Abdul Fazail, of Kundali, and Syud Nazim-ood-deen Hussain, of Jagner, District Puttiala, in the Punjab ; and, continuing in the service of the Emperor Shahab-ood-deen Gori, arrived at such a pitch of elevation and favor that they obtained permission to settle in whatever place was most agreeable to them ; accordingly they made choice of the tract of land in this zillah lying between the Rivers Ganges and Jumna. From this time the family was divided into two branches,—one of which settled at Belgaram in Oude, and is numerously represented there at this day ; and the other branch is that from which the twelve Syud families who are settled in this zillah are descended.

SECTION II.

The meaning of the appellation “ twelve Syud families ” (“ Barah Saiyadat ”).

With respect to this term, there are several accounts current amongst the Syuds of this branch of the family. One is this,—that on their first coming into this country, these people remained for some time in the service of the Emperor, but (*lushkar se bahir*) without the camp—that is, they resided apart. From this cause they were known as the *bahir ke Saiyadat*. In time *bahir* became corrupted into *barah*.

The second account is this,—That the religion of this tribe is that of Ali Imamiya, and that on account of their reverence for the twelve (*barah*) Imams, they were known as the twelve.

The third account is this,—That wherever twelve, fifteen, or twenty villages are occupied by one tribe, and they acquire distinction by the acquisition of landed property in that neighbourhood, that collection of villages becomes known as the twelve villages of the caste to which they belong. Thus, in Zillah Boolundshuhur, Pergunnah Ahar, Tehseel Anoopshuhur, the twelve villages of the Pathans are well known.

The fourth account is this,—That this word was originally *abrar*, and that in the first place the tribe was known as the Saiyadat *abrar*—that is, the pure Syuds—just as at the present day they are known as the Saiyadat *uzam*, the great Syuds; and that *abrar* became corrupted in the speech of the common people into *barak*. Although the truth of no one opinion is sufficiently established, yet the majority of persons are in favor of the first explanation.

SECTION III.

Account of the formation of four branches corresponding with the four sons of Syud Abdul Fera, the common ancestor.

In Section I. it is stated that Syud Daud took up his residence at the village of Tainpoor, Abdul Fazl at Chattanoor, Abdul Fazail at Kundali, and Nazim-ood-deen at Jagner. Thence it is that each branch became known by the name of that village where it had first settled, as shown in the following table :—

SYUD ABDUL FERA.

<i>Syud Daud.</i>	<i>Syud Abdul Fazl.</i>	<i>Syud Abdul Fazail.</i>	<i>Syud Nazim-ood-deen.</i>
First settled at Tainpore; went from thence to Dansrec. Head of the Tainpoorie Branch.	First settled at Chabbanoor; went from thence to Sumbhulhera. Head of the Chatraorie Branch.	First settled at Kundali; went from thence to Magera. Head of the Kundhwar Branch.	First settled at Jagner; went from thence to Bidoli. Head of the Jagneree Branch.

SECTION IV.

Some account of the descendants of Syud Daud, founder of the Tainpoorie Branch.

Syud Khan Meer, in the eighth generation from Syud Daud, leaving Tainpoor, came and settled in the village of Dansree, Pergunnah Jowlee Jansuth. He had four sons,—Syud Meer Shaïd, Syud Jaman, Syud Hussain, and Syud Ahmed,—who became known by the appellation of Tainpoorie. All the Syuds who are known by the surname of Tainpoorie are descended from Khan Meer, the eldest son of Syud Daud. In course of time they settled in other villages; but at the present time there is no family of Syuds in the village of Dansree. The particulars relating to the four sons of Syud Khan Meer are as follows:—Syud Meer Shaïd, the eldest son of Khan Meer, settled in the town of Jansuth. Previous to his arrival the land-holders of that village were Jâts and Brahmins, but after a time the descendants of Syud Meer Shaïd acquired the proprietary rights in the land of that village; and at a still later period his descendants arrived at such a state of prosperity that, in the reign of the Emperor Bahadoor Shah, 1119 of the Hejira, this place became known far and wide.

About 162 years ago, Hussun Ali Khan, the eldest son, and Hussain Ali Khan, the youngest son of Abd-ool-lah Khan, Wazir, received a yearly allowance of Rs. 50,000 from the Emperor Aurungzebe; and besides this the Government of the Province of Allahabad was bestowed on Hussun Ali Khan, and that of the Province of Behar on Hoossain Ali Khan; and the Emperor Ferok Shah conferred on the elder son the title of Abd-ool-lah Khan Kootub-ul-mulk, and on the younger son the title of Ameer-ool-Umra, and invested him with the command of the army. A short time after, in the same reign, the decay of their grandeur commenced, and was hastened by the enmity of the Mogul nobility. In 1141 of the Hejira, in the reign of the Emperor Mahomed Shah, Hussain Ali Khan, the Commander-in-Chief of the Army, was slain during a journey by the hand of Mahomed Amir Khan, a dependant of Kumr-ood-deen Khan. Hussain Ali Khan the Emperor seized, and, after keeping him in prison a few days, put him to death. Sarf-ood-deen Ali Khan, their youngest brother, with a number of his class, having subdued a portion of the Doab country, the Emperor led an army into the district and took possession of it. From that era the fortunes of the Syuds were

on the wane. The descendants of Meer Syud are now to be found in the town of Jansuth.

SECTION V.

Some account of the descendants of Syud Zuman, second son of Syud Khan Meer.

Syud Zuman, leaving the village of Dansree, settled at Chittora, in the Pergunnah of Jowlee Jansuth. Syud Julal attained to a high rank in the reign of the Emperor Shahjehan. He took up his abode at the village of Kirwa (Julalpore), in the District of Surdhunnah, in Zillah Meerut, and acquired the proprietary rights in about twenty-four villages.

Mahomed Sulah Khan, taking service in the kingdom of Oude, after a short time, by the construction of a bazaar and other buildings extending for half a mile, raised this village to the dignity of a town; but Mahomed Sulah Khan died without children, and Shumsh, the son of Julal, left the Imperial service.

From this cause we may trace the loss of their former power. Syud Shumsh left two sons,—Husd Ali and Asjhrab Ali. The descendants of Asjhrab Ali are now living in the village of Kurora, District Surdhunnah, Zillah Meerut; and the descendants of Hasd Ali at Chittora. The inhabitants of Chittora, in 1842 and 1843, on account of their poverty, sold the whole of the bricks from the ruins of this place for Rs. 10,000 to Government, and they were used in the construction of the bridges over the Ganges Canal. At the present time, some very slight traces of the former buildings may be seen in the neighbourhood of the village, and the Syuds who live there are much impoverished. On this account this village is in a bad state, and the dwellings are without any of their former pretensions; and the single village of Chittora is now the only landed property they possess.

SECTION VI.

Some account of the descendants of Syud Hunsur, third son of Khan Meer.

Syud Hunsur, leaving the village of Dansree, went first to the village of Beharee, in Mozuffernugger. Six sons were born to him,—Syud Kootub, Syud Sultan, Syud Yusuf, Syud Khan, Syud Man, and Syud Nasir-ood-deen. The Syuds of Belaspore, Mozuffernugger, are descended from Syud Kootub. It is evident from the remains of former buildings, that the members of this family were in the Imperial service. At the present time, the greater number of the Syuds of this village are either small proprietors or simple cultivators, and some are in service. Syud Masum Ali Khan, the leading man of this village, is an Extra Assistant Commissioner in the Punjab, at Mooltan. The Syuds of Rateri are also descended from this family. The descendants of Sultan, the second son, dwell in great numbers in the village of Sundowlee, Mozuffernugger. In former times, many members of this family were in the Imperial service. The buildings constructed by them are still in existence; and at the present time many of the Syuds of this village are zemindars, maafedars, and cultivators; and Bahadur Husain is a Tehseeldar in Umballa. The descendants of Yusuf, the third son, are residents in the villages of Beharee and Wailua. They also are zemindars, maafedars, and cultivators; but in old time their ancestors were persons of rank in the Imperial Court. Syud Khan and Syud Man, two of the sons, died without children; and Nasir-ood-deen, the sixth son of Hunsur, known as the Nawab Khan Jahan Khan, and also as Moozuffur Khan, in the reign of the Emperor Shahjehan, attained such prosperity that forty villages in Pergunnah Khutowli, and ten thousand beegahs of land free in perpetuity from Government revenue were bestowed on him, and that rent-free land is still in possession of the descendants of those to whom it was originally granted; and at that time the title of Abul Moozuffur was bestowed on the Nawab Khan Jahan Khan; and he giving his name to Mozuffernugger raised it to the rank of a town; and the descendants of Lashkar Khan, his second son, are still to be found in great numbers in Mungr and other villages. Abul Munsoor Khan, the third son, gave his name to Mun-

soorpore, and his descendants are still residing at that place and Kuttowli, and possess the landed property and the old grants of rent-free land ; and the family of Munsoorpore is still one of distinction.

SECTION VII.

Some account of the descendants of Syud Ahmud, the fourth son of Syud Khan Meer.

Syud Ahmud, leaving the village of Dansree, fixed his residence at the village of Kawal, Pergunnah Jowli Jansuth ; his descendants are now to be found in that same village. Tatar Khan and Dewan Yar Mahommed, members of this family, were persons of distinction in the reign of the Emperor Alumgir ; and their fine buildings are still in existence ; their descendants have landed property in Kawal, and the Syuds of this branch in the last-mentioned village are persons of importance.

SECTION VIII.

Some account of the descendants of Syud Abul Fazl, of the Chatrori Branch, second son of Abdul Fera.

Syud Abdul Fazl, the second son of Abdul Fera, chose the village of Chatbanoor. One of his descendants, Syud Hasu Fakir-ood-deen, in the reign of the Emperor Akhbar Shah, through his devotion to field sports in this neighbourhood, formed an intimacy with the Rajah of Sumbulhera, and his son Ram Chund. Soon after, the Rajah dying, his son was confirmed in his dignity by the aid of Hasn Fakir-ood-deen. Not long after Ram Chund died without children, and his wife was secured in the title of Ranee by the same assistance ; and the friendly union between the two families was strengthened to such a degree that the Ranee, adopting Hasn Fakir-ood-deen as her son, made a gift of all her property to him ; and after the gift had been sanctioned by the Imperial Court, she made over possession to him in her life-time. For this reason, Hasn Fakir-ood-deen settled at Sumbulhera, where his descendants are still to be found. Another branch of them are living in the village of Tipa. Among the descendants of Syud Hadiga were four brothers,—Syud Ali, Syud Ahmud, Syud Taq-ood-deen, and Syud Salah. Syud Ali died without children ; Syud Ahmud was killed in a war between the Emperor Ala-ood-deen Gori and the Rajah Ratn Sen, of Chitaghore ; Syud Gadan, his descendant in the fourth generation, settled in the village of Kailadai, Pergunnah Khutowlee, and his descendants were persons of importance in past times ; and by the favour of the Emperor Mahomed Shah, Ali Khan rose to high rank. The grand buildings he caused to be erected are still in existence in the village referred to, and his family is distinguished among the twelve (*Barah Saiyadat*). Syud Meer, son of Saj-ood-deen, left Sumbulhera for Kukrowlee ; and great numbers of his descendants are to be found at this day in those two villages ; and Syud Ali Hasn is accounted a person of importance among the inhabitants of Kukrowlee, from his rank of Talookdar. The buildings erected by the various members of the family in this village are very handsome. This family is also settled in the village of Berai.

SECTION IX.

Account of the descendants of Syud Salah Auluya, the fourth son.

Syud Salah left Sumbulhera for Kayatora, a village which derived its name from the fact of the land belonging to the Kayaths. A widow belonging to that caste was the most wealthy of the zemindars, and had one son who was killed by a tiger in the vicinity of the village. She caused it to be proclaimed that if any one would kill the tiger she would give him the half of her property. Syud Salah arriving about that time, killed the tiger ; and the woman, from joy at the death of the animal, presented him with the whole of the village, and, adopting him as her son, made him live with her. From that time the Syuds have lived in Kayatora. Syud Salah had two sons,—Haidar Khan and Mahommed Khan ; and the descendants of the latter in Kayatora became known as the Mahommed Khani family ; and those of the former in Meeranpore, where they settled, as the Haidar Khaui family.

Nawab Nasarat Yar Khan and Ruka-ood-dowla, members of the family of Mahomed Khan, were appointed in the reign of Alimgir to the Government of the Provinces of Gujarat, Agra, and Patna, with a monthly allowance of Rs. 5,000 ; and twenty-eight rent-free villages in Pergunnah Narjol, in the district of Ahmedabad, were granted to them in perpetuity. They remained in possession until 1850 ; since that time the property has been farmed by Feroz Shah. The buildings formerly erected by this family are to be seen in great numbers in the village at the present time.

The Syuds of this village are partly landed proprietors, and partly cultivators and domestic servants ; and in the family of Haidar Khan the Nawab Shahomat Khan, who founded the town of Meeranpore, is the most known to fame. The descendants of Haidar Khan are still settled in the villages of Meeranpore, Gardalai, and Bhopai. With respect to Meeranpore, it is stated that he purchased some land suited for a village between Khargatora and Baleepore, and founded the town, as mentioned above. There was no cultivated nor cultivable land attached to the village at that time, but subsequently some land formerly occupied by village sites was taken into cultivation, and a jumma of Rs. 40 fixed upon it. Most of the Syuds of this branch are in service at this time. Syud Tuffuzzool Hussain is Tehseeldar of Sirdhana, Zillah Meerut.

SECTION X.

Account of the descendants of Syud Abul Fazail, and of the origin of the name given to the village of Majhera.

Syud Abul Fazail, leaving the village of Kundalee, in Palnala, settled in Majhera ; moreover, he was the founder of it. It would seem that the land produced *moonj* in great quantities ; hence its name of Munjhera. At the present day the traces of *pucka* buildings are to be seen uninterruptedly on the road from Munjhera to Mnaseepore, a distance of about two miles ; and the village of Baleepore, which lies between the two, and in which Wali Mahomed lives, was at one time a mohulla of Munjhera, the Syuds of which place were men of note and distinction in the Courts of the Mogul sovereigns. In the present day, the Syuds of this branch are distributed among the villages of Baleepoora, Rajherera, Tisong, Sandhera, Munjhera, and Hoshampore ; but many of them are absent from their native villages. Syud Gholam Hussein, of Baleepoora, and Syud Imdad Hussein, of Tisong, Tehseeldar of Anoopshuhar, Zillah Boolundshuhur, are men of station. The inhabitants of Munjhera are very illiterate, and earn their livelihood by agricultural and manual labor ; the village itself being destitute of all pretension, and presenting a very forlorn appearance.

SECTION XI.

Account of the Syuds of the Jagneree Branch,—i. e., the descendants of Nazim-ood-deen Hussein.

Syud Kumr-ood-deen, the son of Nazim-ood-deen Hussein, left Jagneer and went to Bidowlee ; and Syud Fuzl-ood-deen Khan, some generations later, removed from Bidowlee to Paleree, in the Pergunnah of Jowlee Jansuth, and bought the landed property in the villages of Paleree, Chandoree, Chandorai, Julseepore, and Kheree, from the proprietors, men of various castes. For a long time it remained in the possession of the family, but after the late settlement they were forced to sell the proprietary rights in the other villages on account of the deficient harvest occasioned by the drought ; and at the present time they only possess a two-biswah share in Paleree itself. The others earn their livelihood by agriculture, manual labor, and domestic service, and many more through poverty have left their homes and are still missing ; but the members of this family are to be found in great numbers in the town of Bidowlee, and in the Districts of Paneeput and Delhi. In this district—Mozuffernugger—they have no landed property, with the exception of that in the village of Paleree.

S. N. MARTIN,
Collector.

PERGUNNAH MOZUFFERNUGGER.

Originally this pergunnah was known by the name of Tuppeh Surwut, the chief town being Surwut, within half a mile of the present site of Mozuffernugger, and where the remains of tolerable extensive brick foundations are still to be seen.

In the reign of the Emperor Shahjehan Ghazee, Pergunnahs Surwut and Khatowlee were bestowed by sunnud on Syud Moozuffur Khan, *alias* Khanjehan, resident of Beharee, who received the titles of Chowdree and Zemindar. Finding Surwut almost entirely deserted, Syud Moozuffur Khan took some land from Soojroo, otherwise known as "Khoosa Khaira," and, uniting it with Surwut, called the whole, after his own name, Mozuffernugger: this occurred about the year 1046 Fuslee. The pergunnah gradually extended, till it comprised 44 mouzahs, held entirely by Syuds (*Bara Saadut*, or families of Syuds), followers of Syud Moozuffur Khan. At the settlement under Regulation IX., 1833, 20 more mouzahs were added, making in all 64 mouzahs in this pergunnah, for the most part the property of Syuds, with a small sprinkling of Gharrahs, Tuggas, and Goojurs. At the present time, the Syuds have almost entirely disappeared, the money-lenders having stepped into their places. As a rule, the Syuds have been extremely improvident; they have been living beyond their means, and were obliged in consequence to borrow from the mahajuns at a high rate of interest; the time of reckoning came upon them unexpectedly, and, unable to pay, their estates were brought to the hammer.

I do not think this is to be regretted (there are exceptional cases, as I subsequently found when settling the Pergunnah of Bugra), although in some instances the creditors may have acted harshly, if not unscrupulously. The Syuds are a very indolent race, and seldom pay any attention to the improvement of their estates. On the other hand, the mahajuns, hard masters though they be, not unfrequently expend considerable sums in digging wells, tanks, setting up sugar mills, &c., with the view of raising their profits and improving their property. The same effect is to be seen elsewhere: the indolent and unthrifty give way to the energetic and frugal capitalists; and this should not be cause of regret, provided always that the buneahs do not acquire landed property by exacting usurious rates of interest, or by resorting to any of the improper practices, through the aid of the Civil Court, for which they receive credit. I can hardly believe that any man, however urgent his wants, would hold any money dealings with these bankers, if they practised one-half the rascalities which the wealthy natives of this district are accused of doing, in the way of business. There is no doubt that much that is said is attributable to envy; the Syuds do not like to see their neighbours rising to prosperity, whilst their own position is daily growing worse. I have little doubt that there are faults on both sides, on the part of the lender as well as borrower. Having been over the whole of this pergunnah, I observed that the remarkable features and differences of soil which characterise its component parts may be divided into the following classes:—

I.—The most fertile are the villages in the centre of the pergunnah, possessing a very large proportion of canal-irrigated meesun lands, and plenty of resident cultivators. Such villages are—Koorkoorah, Moostafabad, Puchenda Kulan, Meghakhrie, Ratharie, Nuseerpore, Surwut, Bujhairie, Budhairie, Almaspore, and Mukiyalee.

II.—The second class are those in which, although there are advantages of canal irrigation, the soil is not so kind. These villages are to be found slightly to the north and south of the pergunnah,—*viz.*, Bumanhairee, Sherpore, Rampore, &c., to the north; Sulajoodee, Behadurpore, Hoomaenpore, Narana, &c., to the south.

III.—The worst and most unpromising of all are the unirrigated villages on the west side of the Kalee Nuddee. Here the soil is of a light porous nature, entirely dependent upon the rains; even then the crops it produces are extremely poor. The only good villages on the western bank are those of Luchaira and Moulehairee, their

superiority arising from well irrigation. The others are, Kohana, Desatpore, Sadhpore, Mulerah, Sulaimpore, Rookunpore, and others. The same remarks apply to the villages on the eastern side of the nuddee,—viz., Khampore and Budeoola.

There are some inferior Bhoor villages to the east of the pergunnah, skirting along both sides of the sand hills which run from north to south; these are, Kumbhai-ree, Tikuree, Ghutmujhaira, Dhundaira, &c. So fine is the dust, that in high winds the soil rapidly shifts about from place to place; *e. g.*, on the road to Gowlee from Mozuffernugger, every now and then incipient sand hills are to be found running across the thoroughfare, and evidently recently deposited.

It is possible the chain of sand hills (*vide* paragraph 4 of Mr. E. Thornton's Report) already referred to, running from north to south, are similar accumulations of ages; for as soon as a bank is once formed, the rapidity with which the mass increases is astonishing.

A rajbuha runs on the west side of the sand hill, but its effects are not sufficiently visible to form any grounds for an opinion as to how far the face of the country will, in an agricultural point of view, be improved.

Much manure and new layers of earth are required to make the soil productive.

On the whole, the pergunnah has improved greatly since water has been supplied from the Ganges Canal; this will be shown more clearly in a separate statement, in which I have exhibited the amount of profit to be credited to the Canal Department.

On the 15th March, 1862, I assumed charge of the Mozuffernugger District, and with it, of course, the direction of the settlement in progress. I found that the five Pergunnahs of Boorhana, Shikarpore, Goordunpore, Bedowlee, and Thannah Bhowan had been personally examined and assessed by Messrs. Keene and Colvin. Both these officers had reported their proceedings, but the Statements Nos. II., III., which ought to accompany, were not ready; consequently I detained their reports for orders.

2. I first turned my attention to the Mozuffernugger Huzoor Tehseelee, in which the measurements had been completed, the necessary data collected, and ample notes drawn out by Mr. Keene and his deputies, after having visited all of the mouzahs under settlement. Upon enquiry, I ascertained that a considerable difference had occurred in the general character of the cultivation of this Tehseelee, bordering on the Ganges Canal. Many rajbuhahs or canal cuts had been made since the completion of the measurements in 1860. Again, in other mouzahs, the landholders were purposely holding back in hopes of getting their estates dotted down as unirrigated, though capable of irrigation. It was therefore necessary to institute a strict enquiry into the present, and what was likely to be the future, condition of all such estates capable of receiving canal irrigation before a proper estimate could be formed of their net assets over a series of years.

3. Having organized a party of inspection under the Tehseeldar and Canongoes, who received instructions to place no undue reliance on the Putwarees' papers, I myself proceeded to make local investigations, while the Rubbee crop of 1269 Fuslee was on the ground. I personally revisited* three-fourths of the pergunnah, and the results of my enquiries are given in this report.

* Mr. Keene also had inspected this pergunnah. I subsequently revisited the whole of the pergunnah.

It is as well to mention that, although there were returns both in English and Vernacular of the number of beegahs under irrigation, prepared by the Superintendent, Canal Department, yet these returns were not sufficiently accurate; they did not

correspond with each other, nor were they very recent. The whole of the irrigated area, therefore, was re-investigated and corrected up to date. The subjoined table gives the whole area of the Mozuffernugger Pergunnah in acres :—

Irrigated.	Unirrigated.	Culturable.	Waste, including maáfee. (Minhaie.)	Total area.
21,664	20,253	8,328	10,776	61,021

4. Mr. Keene has mentioned in his report the different methods he adopted in framing his rental estimates. The first two of his estimates are derived from the nikasee papers, by taking an average of the nijkaree, or rents in kind, over five years, applying the money value there mentioned to the average of produce, and adding this on to the quinquennial average of the zubtee, or rents in money, which are always accepted as recorded. The difference in the second estimate is, the zubtee and nijkaree money value are added together, to get a rent-rate for the whole cultivated area. These nikasees, however, are never very reliable. Where farms exist, an approximate rental estimate, can be very easily obtained; these farms are called "tushkhees." In the third estimate, the zubtee rents the same as above; the

Mr. Thornton appraised 14,574 acres before he made produce tables,—see paragraph 17 of his Report,—and took kunkoot chittas from the people themselves for 413,650 acres,—see paragraph 18.

This estimate is intended to cover rise in rentals. For a full description of these estimates, see Mr. Thornton's Appendices No. 2 and No. 5, paragraph 21 of Settlement Report for Mozuffernugger.

nijkaree is produced by applying Mr. E. Thornton's tables, showing what ought to have been the out-turn on similar lands under similar circumstances, and in average years, reduced to money value by the average prices of ten years, excluding the year of famine as an exceptional one. A fourth is added to the sum-total, so as to make up the present price of produce in the fourth estimate, which is got by applying Mr. Thornton's chuk, or circle rent-rates,—that officer having divided the whole district into various circles, classified according to the kinds of soil prevailing in the neighbourhood. Both these data derived from Mr. E. Thornton's settlement report are exceedingly valuable,—*vide* sample of all these estimates given among the Appendices, *viz.*, Mouzah Aurungabad, a Bhyachara estate. The circle rates, however, though I have assumed them as my standard, are high, when one-fourth is added for the increase of prices. The total pergunnah estimate equals Rs. 1,55,000.

The rental of the pergunnah, including life-maáfees, according to my estimate, is Rs. 1,44,284.

We now come to the Canoongoe's and Peshkar's "douls," which by themselves are not to be relied on, but are useful when an average "jumma" is to be struck out of the results of these and several other estimates. Not unfrequently I have found the Peshkar's estimate very near the mark. To check these official calculations, "douls," or estimates, have been taken from the most respectable zemindars in the Pergunnah, on the principle that, although zemindars never fairly assess themselves, they do not object to assessing their neighbours (*vide* Statement, and paragraph 53, "Directions to Settlement Officers"). As a further aid towards arriving at the solution of that most difficult of all revenue problems, the approximate rental of an estate (*vide* paragraphs 50, 51, "Directions to Settlement Officers," being exactly apposite to this district, where at least one-half, if not more, of the rents are received in kind), I have collected the rent and revenue rates of Saharunpore and Boolundshuhur, compared them with the dry and well irrigation rent-rates of Mr. Thornton; and, lastly, have subjected to the test of actual "kunkoots" one pukka beegah of every class of soil, in every class of estate, both in the Rubbee harvest of 1269 Fuslee, and the Khureef harvest of 1270 Fuslee; the purtals being carried out at different points of the district at the same time. Lastly, I have, after careful local enquiry, classified villages which appeared similar in most respects, and then, with a pergunnah map before me, showing the various rates of the

old jumma on the malgoozaree and cultivated areas, I have increased, upheld, or diminished the former jummas, as the case might require,—see general remarks in Statement No. II.

Extract from Mr. E. Thornton's Settlement Report.

5. Paragraph 24 of Mr. E. Thornton's Report on the Settlement of Mozuffernugger, 1841:—"There is another point to be ascertained,—viz., the extent "to which irrigation can and will be increased, especially with reference to the proposed "canal from the Ganges. It seems impossible to lay down any complete rule for the "formation of a permanent assessment on the eve, as I trust we are, of a measure "which will produce so immense a change in the condition of a sandy and totally "unirrigated tract." Whilst assessing any estate, I have never lost sight of the great increase which may reasonably be expected to those mouzahs where the canal has recently spread its fertilizing waters over what is exhibited by their past state. It is quite possible that in some instances I might have raised the jummas of those villages where the water has been used for some time, higher than I have done; but I preferred making a gradual increase, as laid down in paragraph 66, Directions to Settlement Officers, and I gave due consideration to the fact that canal water is at times precarious, not sufficient to supply the remote rajbuhas, while those near the feeders are always supplied. I have had many complaints about the uncertainty in the supply of canal water, often just at the critical period when the cane crops threaten to dry up, unless moisture is given to their roots. On enquiry at Roorkee, I ascertained these complaints to be well founded, and, indeed, I have myself witnessed

The Canal Officers have had their attention directed to these grievances.

cases of injury from the above cause. This is why the zemindars value their wells, for there they can command the supply, whereas the Chuprassees and Moonshees are very much the masters of canal water. I also bore in mind that the Canal authorities were raising their water-rates to 13 annas on every "kutchah" beegah, and to something above one rupee for sugar-cane fields, or more than Rs. 3 per "pucka" beegah. We were thus pulling at both ends, and I think erroneously: either one or the other Department should have decided on the increased revenue that ought to be demanded; in fact, I am of opinion that a radical change is called for in the arrangements of the Canal Department. There are two alternatives: *first*, to make assessments in a lump with the Lumberdars, and allow them to divide the water among their tenants, thereby effecting a saving in the whole establishment of Ameens and a greater part of the Chuprassees. The cultivators must, of course, be protected against oppression, such as malicious stoppage of the water-supply; a summary remedy to be applied to such cases, as is done in cases of exacting land-rent. *Second*, to make a permanent water-rate, taking the results of our measurements as the basis. The present canal arrangements are very defective, and the cause of much trouble and annoyance to the agricultural classes. The subject is, I am aware, a very difficult one; but something should be done to check the exactions of the native subordinates, especially the Moonshees and Overseers. Since the above was written, the question, I am glad to see, has been taken in hand and disposed of,—see correspondence.

This has since been settled at the Canal Conference.

6. I wish here to state some of the objections brought against the canal water. It is said that, after a few years of irrigation from the canal, the land becomes so impoverished that its yield is not more than one-half what it ought to be. At first the zemindars are only too glad to get the water, and by irrigating highly they draw from the land crop after crop, without returning any equivalent, till at last the land becomes quite sick, and refuses to grow any more. This, I think, is an exaggerated account, put forward in order to prevent the Settlement Officer laying too high a value on canal irrigation. Zemindars flood their lands where the level is below the canal; but where it is higher, and they have to expend labour in raising the water, there deterioration does not occur, and crops are luxuriant, showing clearly that injudicious and excessive irrigation is the cause of the mischief, and not any injurious

properties the water may possess. A well-revised rate in "tor" and "dal" will check this; at the same time, it cannot be ignored that in many places the zemindars are taking more from the land than is prudent; much more exhaustion goes on than the land can bear in the long run, and the effect of this will be seen hereafter in the diminishing value of the crops. The zemindars have yet to learn that the land requires rest, and stimulation by the aid of manure; but as long as the little manure produced on their estates is burnt as fuel, I am at a loss to see how this deterioration is to be remedied. A good English farmer would tell them that to increase the supply of manure they must keep more live stock, and relieve the land by a better system of rotation of crops. Where villages near the Bhoor and sandy tracts lie below the level of the canal, the land, owing to percolation, and the water forcing its way up, becomes spongy, and covered with a saline substance called "reh," which effectually destroys its productive powers. Drainage is the only thing to check this, and even then it is very doubtful, as Lieutenant-Colonel Turnbull, Superintendent-General of Canal Irrigation, shows to be the case in his own private garden at Roorkee, where a few years back the finest garden crops were produced, and now, notwithstanding draining, nothing thrives. Fortunately these drawbacks are as nothing, compared to the benefits of the canal.

See my report on villages injuriously affected by Eastern Jumna Canal.

7. There are other important elements for the consideration of the Settlement Officer, such as the class of cultivators, deterioration of estates from years of distress, a multiplicity of needy shareholders, &c. Where the proprietors in a co-parcenary estate are very numerous and needy, it would not be prudent, for many reasons, to tax to the same amount as where there is a single and wealthy proprietor, although the land in both cases is justly considered hypothecated to the payment of its proportionate amount of rent or revenue. What I mean by lightly laying on the tax where I find a large number of needy shareholders is this: where an increase is called for on the past jumma, I am disinclined to raise it to the full amount in Bhyachara estates occupied by a numerous brotherhood, the reasons are obvious, and yet not to make too notable a distinction (*vide* paragraph 66, "Directions to Settlement Officers"). The assessment has unfortunately been preceded by several bad years, including those of mutiny and famine; the wealthy capitalists have alone been able to hold out, but the Bhyachara villages have been greatly depressed. Owing to these untoward circumstances, the zemindars of unirrigated lands have suffered immensely, while those proprietors whose estates border on the canal have been making, during the last year of distress, when grain was selling at 8 seers the rupee, large but temporary profits. All these and other inequalities of position have received their fair amount of consideration, and a jumma has been fixed which I believe in most instances corresponds to the present and future capabilities of the soil; at least, I have spared no pains in fixing equitable jummas. Where canal irrigation has been anticipated in unirrigated estates, a clause has been introduced fixing the period of settlement at 20 years, as prescribed by Government orders. Mozuffernugger is an exception; to it the privilege of a 30 years' settlement for the whole of the estate, irrigated and unirrigated, has been extended, upon my application: the same has been granted in Thanah Bhowun. I am opposed to two periods running at the same time and in the same pergunnah. The matter is of very little consequence now that we are on the eve of a permanent settlement, previous to which the whole of the settlements have to come under revision.

8. When, by the outlay of capital, a proprietor, or an industrious body of proprietors, such as Jâts, have unusually improved their estates, due allowance has been made for the interest on this capital,—*vide* paragraph 65, "Directions to Settlement Officers," and Section 37, Saharunpore Circular. The outlay of capital is to be detected in digging wells, reservoirs, locating cultivators, high manuring, and a greater proportion of the valuable crops. It would be clearly unjust to raise the revenue to a high pitch because one zemindar had increased his "meesun" to twice the amount of his

neighbour. "Meesun" I take to mean the most highly manured and irrigated lands in the estate, generally near the site of the village. Mr. E. Thornton in his report mentions that, after sundry calculations, he determined what should be the average quantity of "meesun" under ordinary circumstances, and that when this was exceeded he rated the difference as "rounslee:" 16½ per cent. was considered the proper quantity of meesun; but where it fell short of this, and years must elapse, owing to peculiar circumstances, before the average could be attained, then a further deduction was allowed. Mr. Thornton in another place says 20 per cent. would in fact be a small proportion of meesun to expect by good cultivation; but then he found so much depression in parts, and such great variations, that it was very difficult to fix a standard,—*vide* paragraph 10 of his report. In some mouzahs, the meesun was as high as 82 per cent., whereas on an average it was below 20 per cent., and frequently very much lower still,—*vide* Appendix No. I. In a country like this, where agricultural science is unknown, and where the supply of manure is so limited, I preferred taking each village separately, and not binding myself down implicitly to arithmetical averages as to what should be, instead of as to what is, the average condition of each estate. "The mere circumstance of a pergunnah being settled at a uniform average is no criterion of a just settlement; the application of the average is most useful as a check, and greater confidence may be reposed in a settlement where the averages, if they are various, can be accounted for, than in one where a uniform rate prevails throughout every mehal" (Report on the District of Meerut, No. 140, dated 31st August, 1836; H. M. Elliot). As I have said before, it has always been my endeavour to ascertain what may reasonably be expected to be the condition of estates over a series of years, assigning to Government, under the terms of the Saharunpore Circular, its fair share of increasing prosperity and high prices, at the same time not over-taxing capital, or industrious classes, merely because they are such, nor sparing the indolent through fear of their depraved habits.

9. The tenure most prevalent in this pergunnah is imperfect putteedaree. Where I find the shares are known as so many portions of a beegah, in the form of biswahs, biswansees, &c., and recorded as such in the "khwut," the united responsibility of the whole still existing, I call such estates imperfect putteedaree. Although the responsibility remains intact, the accounts of the puttees are really kept separate, and as soon as the "shamilat" becomes divided we get perfect putteedaree. Bye and bye, as generations roll on, the land becomes minutely sub-divided; it loses the character of puttees, each man's holding becomes the limit of his interest, and we get "Bhyachara." This is the necessary gradation of the village tenures in the North-

* In imperfect putteedaree estates, and putteedaree also.

West. Sometimes the shares* correspond to the sub-division of a rupee or number of ploughs, but generally the integral whole is a beegah.

There are a few pure zemindaree villages, owned by the Nawab of Kurnal and some wealthy mahajuns of Mozuffernugger; but these are very few, as will be seen by the list. The Shurh Nukdee, or estates in which the zemindars' profits have been limited to 18 per cent. over and above the jumma, require more notice. This tenure appears anomalous. It is true, a clause (subsequently superseded) was introduced at the last settlement, legalizing the sale of the hereditary rights of the cultivators in case of default; still the real responsibility attaching to the payment of the revenue rested with the zemindars, who were restricted by the Settlement Officer to the enjoyment of 18 per cent. only over the jumma. The consequence of this has been that, in some cases, where the cultivators were a powerful body, as in Luchaira, the zemindars have not been able to set foot in the villages, the entire management being in the hands of the cultivators, who have dug wells, planted groves, and, in fact, for the last 20 years have exercised all the functions of proprietors. It is now difficult to see how the zemindars can acquire possession without disturbing the constitution of the village; at the same time, as the estate has increased in prosperity, the zemindars should be

Meerut
Part II

15/9
the second
sh. 1/2
1/2

Imperfect
Putteedaree

Shamilat
= 1/2
1/2

P103

allowed something more than 18 per cent. In other cases, such as "Mustafabad," the zemindar, a wealthy bunnea, has taken the law into his own hands, and made the ryots by some means or other resign their privileges,—bullying those who would not yield to his demands, till at last he has reduced his tenants to obedience, and made them tenants-at-will. He has thus acquired a large quantity of seer land, said to be 500 kham beegahs, which he keeps in his own hands. It was very desirable that these "Shurh Nuk-dee" estates should, during the present revision of the land revenue, be settled on some intelligible basis. I referred the subject to the Board of Revenue, and, with the sanction of Government, the Board has abolished entirely the Shurh Nukdee settlement, and reinstated the zemindars in their just privileges. If we had ignored the condition of a percentage, and allowed the zemindar to settle his rates of rent by suits under Act X., 1859, a great amount of litigation would have arisen. This has all been avoided, and the rents of these assamees have been converted into fixed money rates prevailing in the neighbourhood,—*vide* annexure. The interference of the Settlement Officer was urgently required, because the disorder was occasioned by the acts of the officers of the old assessment.

10. Mr. Keene has already in his report detailed fully the character of the prevailing rents; all that I wish to add is, that every opportunity has been taken to induce the people to convert their nijkaree, or rents in kind, into money rents. Nijkaree rents are a fruitful source of quarrel. At this time, whilst I am writing (May 2nd, 1862), Mr. Lane, Deputy Collector, reports that, in a large village in Pergunnah Poor, the crops, though ripe and ready days ago, are still allowed to stand, because the zemindars and ryots cannot come to an understanding about their division. Frequently petitions are given in by the assamees that the zemindar will not be present at the time the kunkoot (or valuation) and buttai (or division of crop) is being made; and so, *vice versa*, the zemindars complain against the ryots. By the Sudder Board's Circular No. 45, dated 21st January, 1861, to Commissioner of Meerut, we write on such petitions that whoever fails to be present on these occasions subjects himself to the penalty of receiving a decree for that amount only which is stated by the opposite party to be the share. The assamees also raise objections, not to the amount of crop taken as the zemindars' share, and entered in the Putwarees' papers, but to the rough valuations (kunkoot) made by appraisers in the bidding of the zemindars; assessing a field, for instance, at ten, where it ought to be eight, maunds, and to the extra little cesses laid on at the time of the valuations. No sooner were the jummas declared in Mozuffernugger, than large bodies of the cultivators (*e. g.*, Surwut, &c.) came forward and petitioned to have their rents fixed in money; but the zemindars are unwilling to deviate from the past custom, deeming that fixed rents cripple their authority and render the ryots independent. There is no doubt that collecting rents in kind is a barbarous mode, suitable only to a new country, where the land has just been reclaimed from the wilderness, or where money and markets are scarce, but should be abandoned in this district, where these conditions do not apply, and where, as before mentioned, the vast majority of cultivators are desirous of obtaining a fixed money rent. I am of opinion that justice may be done to both landlord and tenants by giving a money rent calculated upon a valuation of the average amount of produce received by the zemindar in kind during the past 10 years, and the average value of similar lands in the vicinity. I consider money rents on the cultivation of tenants possessing rights of occupancy, variable only on good proof, as required by Act X., 1859, quite fair to the zemindar, and the only safe remedy against agrarian disputes. I have made a separate report upon this in an appeal case before the Commissioner,—*vide* my letter No. 254, dated 14th August, 1862. Since the above was written, the Board, on my application, has invested Settlement Officers with powers to revise rents under Regulation VII., 1822; and to legalize these proceedings, a fresh enactment, Act XIV., 1863, was promulgated.

11. Admitting that the acceptance of the jumma is not a sure sign of its fairness, for it often happens, as is said in the "Directions to Settlement Officers," para-

graph 63, that the people sign their engagements out of fear of alienation of their property ; still I think it worthy of mention in this report that the zemindars of this pergunnah willingly took up their jummas ; indeed, I do not know how it could be otherwise, seeing the highest rate on the malgoozaree area is to be found in Mouzah Bujhairee, being per acre Rs. 3-3-3½ on cultivation, and Rs. 3-1-3 on malgoozaree area.

* Including life-maafees.

The whole increase* on the past jumma of this pergunnah amounts to Rs. 12,167-6-11, which gives the following revenue rates on the whole area :—

	Ra.	As.	P.
On cultivated area per acre ...	1	10	0½
On malgoozaree ditto ...	1	5	9

I have every reason to believe that this jumma will be collected with facility, and that, with the aid of an ample supply of canal water, a handsome marginal profit will be left to the landed proprietors. I hope some day to see this jumma confirmed in perpetuity. Since this was penned, the despatch from the Home Government has been received, which leaves but little doubt that this revision of the land revenue, North-Western Provinces, will be permanent. A boon of inestimable value will thus be conferred on the landholders, the chief tax-paying class of this country, who have hitherto borne the greater part of the burdens of the State.

Government will certainly not be the sufferer by granting this concession. The whole pergunnah has been brought under cultivation, the culturable area consisting mainly of lands allowed to lie fallow in order to gain strength. By fixing unalterably the jumma, the zemindars will strive more and more to increase the productive powers of their estates, the value of landed property will rise, and in the train of increased production will of course follow contentment and augmented wealth, with a greater consumption of taxable articles other than land produce.

S. N. MARTIN,

Collector.

1862.

Classification of Mouzahs in Pergunnah Mozuffernugger.

Class I., or the most fertile irrigated villages, with the largest proportion of meesun lands.	Class II., or irrigated villages, but not so prosperous as Class No. I.	Class III., or unirrigated villages, more or less indifferent.
(1) Almaspoor, (2) Bujhairee, (3) Budhairee, (4) Bunnee Bagoowalee, (5) Beharee, (6) Puchainda Kulan, (7) Dutteana, (8) Rai, (9) Surwut, (10) Siasona, (11) Kookura, (12) Mukiyalee, (13) Shahabodeenpoor, (14) Moostufabad, (15) Maigakhairae, (16) Yoosoofoor, (17) Khairee, (18) Nuseerpoor, (19) Luchaira, (20) Mirzapoor, (21) Rampoor.	(1 to 5) Qusbah Mozuffernugger, five puttees, (6) Chandpoor, (7) Belaspoor, (8) Bijooopoora, (9) Puchainda Khoord, (10) Bumnhairee, (11) Maidpoor, (12) Shairpoor, (13) Soojroo, (14) Mamlana, (15) Shairnuggur, (16) Rohana Khoord, (17) Rohana Kulan, (18) Beebeepoor.	(1) Bindeoora, (2) Budeewala, (3) Khampoor, (4) Daisutpoor, (5) Sadhpoor, (6) Muleera, (7) Salampoor, (8) Rookunpoor, (9) Khanjehanpoor, (10) Mundeera, (11) Meerampoor, (12) Seemlee, (13) Nurrah, (14) Selajoodee, (15) Nerana, (16) Hoomaieenpoor, (17) Bheekae, (18) Dhundaira, (19) Sukraira, (20) Jhut-mujhaira, (21) Tiguree, (22) Kumbhaira.
Total, 21 Villages. 1 Puttee Beharee. — 22 —	Total 14 Villages 4 Puttees Mozuffernugger. — 18 — Grand Total, 62 Mehals.	Total, 22 Villages.
Ra. As. P. Revenue rate per acre malgoozaree ... 1 13 5½ Ditto cultivated ... 2 0 7½	Ra. As. P. Revenue rate per acre malgoozaree ... 1 5 7 Ditto cultivated ... 1 9 11½	Ra. As. P. Revenue rate per acre malgoozaree ... 0 14 10½ Ditto cultivated ... 1 3 8½

Mr. Thornton, when reviewing the general features of the whole district, says in paragraph 26 of his very useful report that “there are about thirty mouzahs of peculiar “excellence in the zillah, their superiority being attributable to a dip in the general

"level of the country, therefore retaining the waters that fall on the surface." Of these he gives a prominent place to the Puchainda Kulan circle, in the Mozuffernugger Pergunnah. He refers more particularly to Puchaind, Moostufabad, and such like; but, taken as a whole, Pergunnah Mozuffernugger cannot be called a rich pergunnah, like Khatowlee. The Syud proprietors are miserably poor,—in fact, they are all sold up, and glad to take service wherever they can get it.

S. N. MARTIN,
Collector.

Aurangabad : Bhyachara village, Pergunnah Thannah Bhowun, Zillah Mozuffernugger.

Present jumma Rs. 1,464.

HELD and cultivated by Jâts and Rors. Canal-irrigated. Average irrigation

Sample of the method adopted in framing rental estimates previous to assessment.

canal returns of 1839-40, 1840-41, give 400 acres; present measurements, 500. Hence no very material

increase of irrigation since last settlement. Ten wells

work. Prosperous, and pays up well. Soil good, but suffers from "reh," a salin substance. The best crops grow well. Sewaee items insignificant. Market 4 miles off, at Thannah Bhowun. Proprietary mutations small. No balances.

Area, former.	Waste.	Maâfee.	Culturable.	Judeed.	Cultivated.	Total.	M. R.	C. R.
982	* 146	5	* 184	...	647	831	1 12 2½	2 3 11
Area, present.								
1,004	* 174	...	* 87	32	711	830		

* The excess of waste is owing to decrease of culturable, "reh" having affected the land.

		Irrigated.	Unirrigated.	Total.
Meesun	...	129	...	129
Roaleo	...	380	13	393
Dakur	...	189	...	189
Total	...	*698	13	711

* Canal records show an average irrigation during 1858-59-60 of 367 acres.

1. The first rental estimate to be ascertained is that afforded by the Putwarees' "nikassees." It is ascertained by the following process :—

Name of crop.	1261 Ruasee. Amount of land.	Md. Srs. These are kutchas mds.; two go to the pucca maund.	Value.	1262 Ruasee. Amount of land.	Md. Srs.	Amount of crop (land-lord's share).	Value.	1263 Ruasee. Amount of land.	Bghs. Bis.	Md. Srs.	Amount of crop (land-lord's share).	Value.	1864 Ruasee. Amount of land.	Md. Srs.	Amount of crop (land-lord's share).	Value.	1265 Ruasee. Amount of land.	Bghs. Bis.	Md. Srs.	Amount of crop (land-lord's share).	Value.	Ra. As. P.	Ra. As. P.
Wheat	*380 6	1,356 20	797 15 0	385 7	1,347 30	599 0 0	401 14	1,545 0	686 10 9	458 17	1,417 20	708 4 0	317 16	194 20	808 1 0								
Gram	51 0	244 20	122 4 0	16 19	428 30	122 8 0	220 17	854 10	310 6 0	181 17	586 20	196 5 6	569 8	1,466 20	488 13 6								
Barley	82 4	274 0	109 9 9	3 0	15 0	3 12 0	20 8	71 20	20 7 0	42 18	145 20	36 4 0	22 0	63 20	18 2 3								
Rice (Shalee)	20 4	61 0	30 8 0	110 11	334 0	121 8 0	57 19	276 20	79 0 0	...	...	...	...	...	...		
Chhora (fine rice),	281 3	1,028 0	514 0 0	240-14	937 0	468 8 0	188 4	343 20	377 6 0	145 6	768 20	256 2 6	46 3	291 0	97 0 0								
Oorud	2 11	4 0	2 10 6	38 13	64 0	32 0 0	2 18	5 0	2 0 0	23 0	7 0	30 0 0	23 0	57 0	25 5 3								
Moong	1 0	1 20	0 13 9	...	...	...	...	...	...	...	...	...	...	...	...
Joar	7 15	8 20	7 13 9	...	...	...	...	...	...	...	...	...	...	...	...
Musoor	5 6	10 0	5 12 3	2 19	5 0	...	...	...	...	...	...	...	...	...	...
Mote	2 0	3 0	1 8 0	3 18	2 20	...	...	...	...	...	...	...	...	...	...
Total	833 9	2,991 0	1,592 15 0	802 1	3,134 0	1,350 12 0	892 0	3,095 30	1,475 13 9	851 18	2,925 0	1,227 0 0	1,018 7	2,972 20	1,237 6 0								
GRAND TOTAL	4,397 15	...	6,881 0 0	...	...	...	...	...	...	...	...	...	...	...	...

Or 4,397 beegahs, 15 biswahs, = 2,226 acres, gives Rs. 6,881.

Hence $6,881 \div 2,226 = \text{Rs } 3 \text{ } 1 \text{ } 5 = \text{rent-rate per acre, and Rs } 1 \text{ } 8 \text{ } 8 \frac{1}{2} = \text{revenue-rate per acre.}$

The measurement papers of 1268 show an area of 482 acres grown with "Nijkaree" crops. The culturable area is under the average of past years, which is 80 acres. The "Judeed" or recently thrown out of cultivation, is also under the average. Hence no acres from either column are added to the 482 acres recorded as cultivated. But the rent-rate of Rs. 3-1-5 applied to 482 acres = a rental of Rs. 1,490, or (barring extra cesses) a jumma of Rs. 745.

* 380 Beegahs. The total area in beegahs is subsequently converted into acres.

Average rent-rate per acre of zuttee crops for 5 years.

Sugar-cane, per acre	=	8	14	2½
Mukkee, ditto	=	2	9	5½
Torya, ditto	=	5	14	9½
Baree, ditto	=	5	14	9½
Churree, ditto	=	2	3	6½
Mundwa, } ditto	=	2	15	5
Saffron, }				

In the measurement papers of 1268 are recorded—

54 acres of Sugar-cane	=	479	15	0	according to average rate above noted.
46 „ Mukkee	=	119	4	0	ditto.
19 „ Baree	=	112	9	0	ditto.
77 „ Churree	=	171	0	7	ditto.
15 „ Mundwa	=	44	7	3	ditto.
3 „ Saffron	=	8	14	2	ditto.
15 „ Toriya	=	88	14	0	ditto.
<hr/>					
229 acres Total	=	1,025	0	0	

Nijkaree rental = 1,490 + 1,025 (zuttee rental) Rs. 2,515 = (—cesses)
1,257-8-0 = jumma.

2. The jumma according to Mr. Thornton's appraisalment is similarly procured, excepting *only* that where the heading "Amount of crop" occurs in the five years' nikasees, the figure inserted is that which, according to Thornton's table, should have been produced, and not that which the "nikasee" represents as having been produced.

3. The "Produce" estimate, as far as the ascertainment of the nijkaree total, is precisely similar to the method detailed under No. 1, and both are derived from the Putwarees' nikasees. The difference occurs in computing the zuttee articles, which is done as follows:—

1261.				1262.				1263.			
Amount of land.			Value of crop at rent-rates.	Amount of land.			Value.	Land.			Value.
Bghs.	Bis.	Bis.	Rs. As. P.	Bghs.	Bis.	Bis.	Rs. As. P.	Bghs.	Bis.	Bis.	Rs. As. P.
354	18	0	613 8 9	444	17	0	648 8 3	257	14	0	567 7 6

1264.				1265.			
Land.			Value.	Land.			Value.
Bghs.	Bs.	Bis.	Rs. As. P.	Bghs.	Bis.	Bis.	Rs. As. P.
297	5	0	284 9 3	103	16	0	271 11 6

Grand Total = beegahs 1,455·10 = Rs. 2,385-13-3.

Beegahs 1,455·10 + 4,397·15 (nijkaree) = 5,853·5 = 2,963 acres.

Rs. 2,385-13-3 + 6,881 (nijkaree) = 9,266-13-3 ∴ (2,963 ÷ 9,266-13-3) = 32·0½ per acre.

(711 acres × 3-2-0½) = 2,224 = Jumma Rs. 1,112.

4. The circle rent-rates supply a jumma as follows. The rates are these :—

Rs. As. P.

Meesun irrigation=9 7 4 (rent-rate).

Roslee irrigation=3 13 5½ („).

Roslee unirrigated=2 9 8½ („).

Dakur irrigation=3 14 2¼ („).

These rates are applied to the amount of each kind of soil as represented for the particular village, and as regards “meesun,” according to the proportion borne by “meesun” to the cultivation of the particular circle. In Aurungabad, the proportions are so nearly regular that the actual figures have been preserved. The result is as follows :—

Rs. As. P.

Meesun irrigation=129 acres=1,220 2 0

Roslee irrigation=380 „ =1,459 10 5

Roslee unirrigated= 13 „ = 33 12 2

Dakur irrigation=189 „ = 734 9 5

Total =711 „ =3,448 4 0

½ =1,724 2 0

5. The “average cultivated rate” of the circle gives 1,939.

6. *Estimate*.—This is yielded by applying the old malgoozaree revenue-rate to the present area=1,464, which at two-third assets represents a jumma bundee of Rs. 2,196=jumma at half assets of 1,098.

7. This is yielded by applying the old rate on cultivation to the actual cultivation as recorded by the measurements, *plus* any excess over the 5 years’ average of culturable and judeed jumma=1,596, or a jumma bundee at two-thirds of 2,394=jumma at half assets of 1,197.

The Canoongoe’s “doul,” or estimate, gives Rs. 2,089,—the standard average (Thornton’s appraisalment) yielding only Rs. 1,280-3-11. Although both Canoongoe’s doul and average circle cultivated rates point higher, I think it safer to retain the jumma given by the circle rates, *plus* Rs. 24 yielded by the sewaiee items (mangoe groves).

The average cultivated rate points much higher, but I am not prepared to make so material an increase, believing, on the whole, that the circumstances of the village do not admit of it.

S. N. MARTIN,
Offg. Collector.

P. S.—In addition to these are the estimates formed by the application of summary suit rent-rates, of “douls” or proposed

NOTE.—In justice to Mr. Colvin, I beg to state these estimates were mostly of his suggestion. I found them in force when I took charge of the district; they appear to me to be reliable, and were accordingly adopted.

assessments by pergunnah officers and respectable land-owners, and any rent-rates ascertained by personal enquiries from tenants, from zemindars, and the Putwarees. No single estimate can be a safe guide; the only way is to take an average of several rentals, and, modified by local knowledge, fix a moderate jumma suitable to the circumstances of each estate.

S. N. MARTIN.

Statement showing amount of profits in the Pergunnah of Mozuffernugger attributable to the Ganges Canal.

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
Pergunnah.	Number of villages irrigated by canal.	Area in acres under canal irrigation.	Former aggregate jumma of these villages.	New jumma.	Increase.	Portion of increase attributable exclusively to influence of canal.	Number of villages injuriously affected by canal.	Former jumma.	New jumma.	Portion of decrease attributable to the influence of canal.	Net gain to the revenue of the pergunnah from the influence of the canal.
			Rs. As. P.	Rs.	Rs. As. P.						Rs.
Mozuffernugger.	46	18,956	45,998 1 5	55,100	9,101 14 7	First estimate, revised under orders of Senior Member, Board of Revenue. First estimate Rs. 8,830. Second revised estimate under orders.	...	...	...	...	16,288

NOTE.—The reason why columns 6 and 7 do not agree is this : Formerly settlements were based on two-thirds of the rental ; under the present system, Government claims one-half only : therefore under ordinary circumstances, if the pergunnah had remained unirrigated, if cultivation had not much increased, and prices had remained nearly stationary, the total jumma of the new settlement would obviously have been much less than the demand of the old settlement ; whereas, owing to the introduction of the canal, not only has a fall in the revenue at half assets been avoided, but a considerable increase has been obtained. Any well irrigation and increase in the cultivation has been allowed for before computing the profits of the canal. All that area which is now meesun, and which but for the canal would have been unirrigated roslee, the difference between the produce of the latter and the former has been credited to the canal. The entry in column 5 includes the jumma assessed on life-maifoes which will fall in presently.

S. N. MARTIN,
Collector.

A NOTE about sugar mills may not be altogether uninteresting.

The sugar mills in this district are made of seesum and sâl wood ; they are worked day and night by ten pairs of bullocks, and are said to cost from Rs. 25 to 30. Generally several cultivators join together in the purchase of a sugar mill. The agreement among themselves is for one partner to work the mill a whole day and night : as much juice as he can express within that time is his property. Then the next partner comes on ; and so they work on the mill in rotation as long as there is any cane left. In this district, the mills commence work in December, and finish in the beginning of February. In one day and a night three or three and a half vessels of juice are expressed, each vessel containing ten to twelve gallons. From the raw juice the following articles are produced :—

(Hindee) “ Rab,” or treacle.

(„) “ Goor,” a rough, coarse sugar.

(„) “ Shukkur,” refined sugar, which sells for about 2½ seers per rupee.

(„) “ Sheera,” or cane juice, which is frequently sold in its raw state.

In some parts of the district, it is customary for one partner to express a certain number of vessels of juice, and then to give it up to the next partner.

The produce of a pucka beegah of land of course varies with the quality of the soil. From enquiries I have made throughout the district, the value per pucka beegah is—

Best quality Rs. 50

Second ditto „ 35 to 40

Third ditto „ 25 to 30

Including tenant's wages of labor,
profits of capital, wear and tear, &c.

The expenses connected with ploughing, planting, digging, in order to loosen the earth after the seed has germinated, and cutting, is considerable ; it may be reckoned at 30 per cent., while the rent will form another 30 per cent., leaving to the cultivator somewhere about 40 per cent. to cover risks, wear and tear, profits, &c. In the Khurreef 1270 Fuslee, the sugar-cane sprouted at the top, and is said to have been very poor in consequence.

S. N. MARTIN,
Collector.

Kunkoot Returns, Pergunnah Mozuffernugger, in 1862.

1.	2.	3.	4.			7.	8.	9.	10.	11.	12.	13.	14.	15.
Kind of soil.	Kind of ap- praisement.	Village.	QUANTITY OF LAND.			Kind of crop.	Total produce.	Expenses.	Share of Ryot.	Share of Malgoosar.	Rate per rupee.	Value of Zemindar's share in money.	Rent-rate per acre.	Remarks.
			Acres.	Roods.	Poles.									
Meeun irri- gated.	Kunkoot	Mosuffabad Yusufpur	1 ...	3 1	...	Wheat Ditto	26 30 0 5 5 0	5 4 8 0 35 0	10 32 12 2 22 0	10 32 12 1 38 0	0 30 0 0 30 0	14 6 9 2 4 3		
		Total Kunkoot	2	...	...	...	31 35 0	5 39 8	13 14 12	13 20 12	...	16 11 0		
Ditto	Hara or But- tasee	Qusba Mozuffe- r-nugger. Rampur Sulaimpur	...	2 2 2	2 2 2	Ditto Ditto Ditto	13 20 0 15 20 0 10 0 0	1 10 0 1 10 0 0 25 0	6 5 0 7 26 8 5 25 0	6 5 0 6 23 8 5 30 0	0 30 0 0 30 0 0 30 0	8 2 6 8 12 6 5 0 0		
		Total	1	4	6	...	39 0 0	5 5 0	19 16 8	16 18 8	...	21 15 0		
		Total of whole irri- gated Meeun land	3	2	6	...	70 35 0	9 4 8	32 31 4	28 39 4	...	38 10 0	10 14 8	
Roslee irri- gated.	Kunkoot	Mosuffabad Yusufpur	1 1	...	...	Wheat Ditto	9 25 0 23 5 0	2 20 0 4 15 0	3 22 8 10 26 0	3 22 8 7 4 0	0 30 0 0 30 0	4 12 0 9 7 3		
		Total Kunkoot	2	2	...	...	31 30 0	6 35 0	14 8 8	10 26 8	...	14 3 3		
Ditto	Hara or But- tasee	Mozuffernugger Shernugger Budherce	...	2 2 2	2 2 2	Wheat Ditto Ditto	4 10 0 11 5 0 9 0 0	0 17 8 1 5 0 1 10 0	1 36 4 5 0 0 3 25 8	1 36 4 5 0 0 4 4 8	0 30 0 0 30 0 0 30 0	2 8 9 6 11 0 5 7 9		
		Total of whole irri- gated Roslee land	1	2	6	...	24 15 0	2 32 8	10 21 12	11 0 12	...	14 11 6		

The expenses include the labour of cutting, canal water-rates, and remissions for errors in the estimates of appraisers. Possibly these expenses have been over rated in order to show diminished profits, but I have not thought it right to alter this column (9). The rate in column 12 is that of fair seasons. In Elliot's Report on the District of Meerut, the remissions on account of the errors of appraisers are called "good season," or damage to crops, which is left to the discretion of the appraisers.—Paragraph 54, No. 140, dated 31st August, 1836.

Kunkoot Returns, Pergunnah Mozuffernugger, in 1862.—(Concluded.)

1.	2.	3.	4.			6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
Kind of soil.	Kind of ap- praisement.	Village.	QUANTITY OF LAND.			Poles.	Kind of crop.	Total produce.	Expenses.	Share of Ryot.	Share of Malgoozar.	Rate per rupee.	Value of Zemindar's share in money.	Rent-rate per acre.	Remarks.
			Acres.	Roods.	...										
By Putwaree's Chitta.	...	Surwut ...	14	1	20	...	Wheat ...	M. S. C. 171 10 0	M. S. C. 22 27 0	M. S. C. 90 12 0	M. S. C. 58 11 0	M. S. C. 0 30 0	Ra. As. P. 77 11 0	Ra. As. P. ...	
		Total of whole irri- gated Roslee land...	18	1	26	...	...	227 15 0	32 14 8	115 2 4	79 38 4	...	106 9 9	5 12 7½	
Dakur irri- gated.	Kunkoot ...	Moostuffabad ...	...	2	2	...	Barley and Muttur.	6 0 0	1 19 0	2 10 8	2 10 8	1 10 0	1 13 0	3 8 7	
Roslee Barance,	Ditto ...	Ditto ...	1	2	...	...	Wheat ...	12 35 0	1 15 0	5 30 0	5 30 0	0 30 0	7 10 8	...	
		Khanjehampore ...	2	...	83	...	Ditto ...	19 5 0	1 30 0	9 13 12	8 1 4	0 30 0	10 11 3	...	
		Total Kunkoot ...	3	2	33	...	...	32 0 0	3 5 0	15 3 12	13 31 4	...	18 15 1	...	
Ditto ...	Hara ...	Mozuffernugger ...	2	...	8	...	Wheat ...	19 0 0	1 35 0	8 22 8	8 22 8	0 30 0	11 6 9	...	
		Rampoor ...	1	...	4	...	Ditto ...	11 0 0	0 30 0	5 20 8	4 29 8	0 30 0	6 5 0	...	
		Salampoor ...	1	...	4	...	Ditto ...	5 0 0	0 30 0	1 37 12	2 12 4	0 30 0	3 1 3	...	
		Kookra ...	2	1	20	...	Muttur ...	12 20 0	...	6 10 0	6 10 0	0 39 8	6 5 0	...	
		Almaspoor ...	...	2	2	...	Ditto ...	6 0 0	...	3 0 0	3 0 0	0 39 8	3 0 6	...	
		Shermugger ...	...	2	2	...	Wheat ...	8 0 0	0 20 0	3 30 0	3 30 0	0 30 0	5 0 0	...	
		Total Hara ...	7	2	...	...	...	61 20 0	3 35 0	29 0 12	28 24 4	...	35 2 6	...	
By Putwaree's Chitta.	...	Surwut ...	3	2	8	...	Wheat ...	20 0 0	3 30 0	9 30 0	6 20 0	0 30 0	8 10 8	...	
		Total of whole Bara- nce land ...	14	3	1	...	...	113 20 0	10 30 0	53 34 8	48 35 8	...	62 3 1	4 3 5½	

Dakur Baranee	Kunkoot	...	Khanjehaunpoor	...	...	1	...	Gram	...	3 5 0	0 10 0	1 21 8	1 13 8	0 33 12	1 10 3	6 9 0
Bhoora do.	Hara	...	Shernuggur	...	1	...	4	Wheat	...	8 0 0	0 20 0	4 39 8	2 20 8	0 30 0	3 5 6	
		...	Budherie	...	...	2	2	Ditto	...	6 10 0	0 25 0	3 25 0	2 0 0	0 30 0	2 10 6	
		...	Total Bhoora Baranee land	...	1	2	6	...	...	14 10 0	1 5 0	8 24 8	4 20 8	...	6 0 0	3 14 5
Chuk average rent-rates of former settlement per acre, as follows :—																
Rent-rates ...	(1st)		Meeun irrigated.	Meeun unirrigated.	Rootee irrigated.	Rootee unirrigated.	Dakur irrigated.	Dakur Baranee.	Bhoor irrigated.	Bhoor Baranee.						
			4 9 5½	3 15 10½	3 13 7	2 4 10½	2 9 9½	2 1 6	1 7 11½	1 7 9						
Ditto ...	(2nd)		10 14 8½	Average of rent-rates per acre got by Kunkoot and actual out-turns, Rubee 1269 Fuslee :—	5 12 7½	4 3 5½	3 8 7	6 9 0	...	3 4 5						
			5 0 0	4 8 7	3 3 0	2 9 6	2 9 0	2 7 0	2 4 0	2 0 0						
			12 0 0	...	4 0 0	Unirrigated soils.										
			11 0 0	...	3 12 0	2 4 0										
			10 8 0	...	3 3 0	2 0 0										
			10 0 0	...	3 0 0	1 12 0										

The high rent of the unirrigated Dakur is due to the limited area of Kunkoot.

Average of the whole on malgozaree area ... 1 3 5
On cultivated ... 1 7 6
These are revenue rates of the Saharunpore Settlement.

NOTE.—It will be observed that there is a great difference between the rent-rates of Nos. 1 and 2. The cause of this difference is that in No. 2 only one harvest has been taken into the estimate, and that consisting of valuable corn crops, whereas if the "Khurreef," with some of its poorer crops, such as churree, jowar, &c., had also come into the calculation, the average rent-rate would have been lower. Money, too, is more plentiful now than it was when Mr. Thornton made his estimates : produce that was selling at a maund per rupee now sells for less than 30 seers per rupee. However, it is satisfactory to think that the rates upon which I have based my calculations are, as compared with actual out-turns, light. Far better that the rates of assessment should be moderate than high. The Khurreef harvest will be similarly tested. This pergunnah was settled before the Khurreef crop 1270 Fuslee was ripe.

S. N. MARTIN,
Collector.

Bazaar prices of grain for the last fifteen years for the Town of Mozuffernugger.

Description of grain.	Year.															Remarks.
	1849-50.	1850-51.	1851-52.	1852-53.	1853-54.	1854-55.	1855-56.	1856-57.	1857-58.	1858-59.	1859-60.	1860-61.	1861-62.	1862-63.	1863-64.	
Wheat ...	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	M. S. C.	This return differs from that obtained from the bazaar of Shamlee. Here prices are gradually rising, and this, I should think, was the truer state of things. I cannot believe prices will remain stationary, or that grain can in the average be cheaper now than it was twenty years ago. As railways increase, and throw out feeders from the main line, the tendency will be to increase largely the trade in grain, and to equalize prices throughout the country.
	0 34 14	0 38 8	0 38 5	0 27 13	0 28 8	0 35 14	0 27 13	0 35 12	0 38 8	0 27 9	0 25 13	0 12 7	0 14 10	0 31 11	0 28 5	
	0 27 10	1 0 13	1 0 2	0 29 12	0 29 2	0 36 13	1 6 11	1 27 12	1 4 11	0 38 11	0 30 8	0 12 10	0 13 1	0 28 4	0 31 9	
Gram ...	1 14 10	1 38 1	1 25 6	0 38 0	0 38 14	1 10 15	1 36 6	1 14 9	1 18 14	1 0 7	0 36 0	0 16 12	0 19 0	1 9 7	1 4 11	
	1 5 7	1 2 3	0 39 1	1 1 13	0 35 10	1 1 0	1 8 0	1 11 0	1 12 14	1 0 0	0 29 12	0 16 1	0 24 12	1 10 3	34 10 0	
	0 8 8	0 8 5	0 8 0	0 8 8	0 8 1	0 8 4	0 9 3	0 10 1	0 11 1	0 10 2	0 8 11	0 7 2	0 7 11	0 8 0	0 7 9	
Rice ...	0 25 10	0 35 12	0 32 5	0 27 4	0 29 1	0 33 12	1 9 15	1 5 14	1 3 12	0 32 2	0 24 4	0 10 12	0 18 3	0 31 9	0 25 3	
	0 23 7	0 32 12	0 30 10	0 27 2	0 28 14	0 35 4	1 10 0	1 0 10	0 37 2	0 30 3	0 21 15	0 8 14	0 15 6	0 27 15	0 26 12	
	1 0 12	1 5 6	0 39 9	0 33 8	0 31 7	0 32 11	1 8 11	1 3 8	0 38 13	0 32 2	0 27 13	0 13 0	0 18 14	0 34 3	0 29 5	
Moong ...	0 39 15	1 11 5	1 8 3	0 33 4	0 34 15	0 36 0	1 8 4	1 8 12	0 38 15	0 38 11	0 36 10	0 14 2	0 19 7	0 33 5	0 33 13	
	
	
Jowar ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	
	
Bajra ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	
	

S. N. MARTIN,
Collector.

Census of Population, Moruferrugger.

Number.	Pergunnah.	Agriculturists.			Non agriculturists.			Grand Total.	Remarks.
		Males.	Females.	Total.	Males.	Females.	Total.		
1	Moruferrugger	7,736	6,173	13,909	15,641	12,890	28,531	42,439	
2	Poor Chupar	6,386	4,763	11,149	9,636	8,082	17,608	28,757	
3	Gordhumpoor	5,365	3,820	9,185	2,403	1,582	3,985	13,170	
4	Churthawal	7,553	5,081	12,634	8,159	6,539	14,698	27,332	
5	Bugra	7,648	5,389	13,037	19,026	9,519	21,545	34,582	
6	Shamlee	12,014	9,171	21,185	16,431	14,190	30,621	51,806	
7	Kyranah	7,531	5,368	12,899	10,641	9,082	19,623	32,522	
8	Bedowlee	3,665	2,964	6,629	7,028	5,889	12,917	19,081	
9	Thannah Bhowm	6,859	4,196	10,495	13,317	11,809	25,126	35,621	
10	Jhinjhana	7,846	6,195	13,841	8,520	6,406	14,926	28,767	
11	Boorhana	6,379	5,858	14,237	11,684	10,406	22,090	36,327	
12	Shikarpoor	9,360	7,258	16,618	16,317	13,124	29,441	46,059	
13	Kandla	17,554	13,193	30,747	16,194	12,737	27,931	58,678	
14	Khatowlee	9,524	7,518	17,042	13,442	11,900	25,342	42,384	
15	Jowlee Jansut	7,162	5,722	12,885	8,982	8,109	17,091	29,976	
16	Bhoma Sambulhera	6,672	5,341	12,213	10,045	8,616	18,661	30,874	
17	Bhokurhairee	7,978	6,052	14,030	10,288	9,014	19,302	33,332	
Total		139,663	* 104,061	242,724	189,609	159,344	348,953	591,697	

* There is a deficiency of females here. Among the Rajpoots, I believe, female infanticide still exists, but not as much as I have observed in the eastern districts of the North-Western Provinces. The Jats industrious and well-to-do as an agricultural community, have a very strong objection to the practice of keeping women, in preference to marriage. The consequence is, these women are constantly unfitted; they are second with other men, and then the Jats try to obtain their remedy by abduction in the Criminal Courts.

A revised census is in progress, the results of which will meet you from the Patwaris' returns recorded above.

S. N. MARTIN,
Collector.

REPORT.

PERGUNNAH CHURTHAWUL.

THIS pergunnah was assessed in November, 1862, after Pergunnah Jhina, and the demand came into force from 1270 Fuslee. I proceed to give a sketch of the pergunnah, and the results of the new settlement.

2. Churthawul covers 92* square miles, and is bounded on the east by the Kalee

* 90.3 in Christian's Census, page 110.

Nudee, on the west by Thannah Bhowun, on the south by Bugra, and on the north by Rampore and Deoband, of the Saharunpore District. The Hindun runs from north to south through the western quarter. Between the Hindun and the Kalee Nudee the land is

Description of pergunnah.

high, but naturally fertile. Water is, as a rule, at a great depth. Masonry wells are scarce, and kutchha wells are only dug at a great expense, lasting for two years, or so. Except in bad rain, year's cultivation is careful and abundant. The villages lie rather far apart, but are large and substantial. Tuggahs on the high land, and Rajpoots towards the Kalee Nudee and Hindun, are the chief castes. Churthawul itself is a small agricultural town, once the residence of an Amil, but now a mere overgrown village. On the west of the Hindun a rajbuha of the Eastern Jumna Canal runs from north to south, and the villages in its neighbourhood are as usual thriving and prosperous. One road runs from west to south-east, coming from Jellalabad and Thannah Bhowun, crossing the Hindun by an unbridged ford, and the Kalee Nudee by a masonry bridge, and so leading to the Mozuffernugger market. The Doab is particularly liable to malaria, and fever interferes severely with agricultural operations in September and October. The population is 297 to the square mile, as against 414 in Christian's Census. The difference I attribute to the drought of 1860-61, which fell very heavily on a pergunnah so deficient in irrigation. The exodus from the Cis-Hindun villages was very general.

3. Mr. Thornton had made four circles, as marked in the accompanying map,

Former circles of assessment.

for assessment. These I have maintained, adding one more. This other included the Trans-Hindun villages, which resemble in soil and population the neighbouring villages of the Thannah Bhowun Pergunnah. I included them in the Kheaooree Circle.

The assessment was conducted on exactly the principles detailed in the Report

Deduced revenue rates of new settlement.

on the Thannah Bhowun Pergunnah. Mr. Thornton's rates for the four circles above mentioned were reduced to half assets and maintained. They then stood as follows:—

			Meesun irrigated.	Meesun unirrigated.	Roslee irrigated.	Roslee unirrigated.	Dakur irrigated.	Dakur unirrigated.	Bhoor irrigated.	Bhoor unirrigated.
Burkullee	...	...	2 2 1½	1 15 6	1 3 3½	0 15 7	0 14 7½	0 13 7½	1 2 4½	0 12 3½
Deedaheree	...	...	2 4 3	2 2 4½	1 11 0½	1 1 8½	1 8 0	1 0 1½	0 11 11½	0 11 6
Kotesarah	...	...	2 4 2½	1 15 10½	1 9 3½	1 1 3	1 1 7½	0 14 4½	1 5 2	0 13 6
Churthawul	...	...	2 12 0	2 6 4½	2 2 7½	1 3 7	1 3 2½	0 14 9	0 15 0	0 9 6
Biralsee	...	...	2 11 1½	2 5 3½	1 12 1	1 4 0½	1 7 3	1 1 3½	0 12 2½	0 11 6
Bugrah	...	...	2 2 8½	1 10 3	1 11 0½	0 15 5	...	0 13 9	...	0 11 6

Former demand, demand at deduced revenue rates, and proposed demand.

4. The former demand was=65,410.

The demand at these

rates would be=64,587.

The proposed demand =61,612.

The rates of the new settlement are—

		<i>Malgoozares rate.</i>			<i>Cultivated rate.</i>		
Rates of the new settlement on circles and castes.	Circle Burkullee	...	1	4	11	1	7 6½
	„ Deedaheree	...	0	14	11½	1	1 4½
	„ Kotesrah	...	1	0	2	1	3 11½
	„ Churthawul	...	1	4	5½	1	6 11½
	„ Biralsee	...	1	5	10	1	9 3
	„ Bugrah	...	0	14	4	0	15 3½
	Pergunnah	...	1	3	0½	1	6 2½

5. The rates on each caste in each circle of the new jumma are as follows (calculated as detailed in paragraph 28 of my Thannah Bhowun Report) :—

I.—CIRCLE KOTESRAH.

1. Tuggahs	...	1	1	8	1	4	6	(three villages.)
2. Jogeas	...	0	6	7½	0	9	4	(one „)
3. Sanees	...	1	7	0	1	11	6	(three „)
4. Raeen	...	0	12	7½	1	4	1	(two „)
5. Rajpoots	...	0	14	3½	1	1	5½	(four „)

II.—CIRCLE CHURTHAWUL.

1. Tuggahs	...	1	2	9½	1	4	6½	(eleven villages.)
2. Sanees	...	1	3	0	1	4	9½	(two „)
3. Garahs	...	1	10	3	1	12	5½	(one „)
4. Syuds	...	1	1	11½	1	4	11½	(one „)

III.—CIRCLE BURKULLEE.

1. Tuggahs	...	1	4	1	1	12	0	(six villages.)
2. Jâts	...	1	4	9	1	7	8½	(three „)
3. Rajpoots	...	0	15	4½	1	3	7	(two „)
4. Sanees	...	0	9	10	1	2	8	(one „)
5. Syuds	...	0	14	2½	0	15	11½	(one „)

Deedaheree and Biralsee are composed either of Rajpoot villages or mixed villages which have not been included in the calculation.

6. The balances have been reported on separately. Excepting the kusbah, which has suffered from litigation and recent drought, Russoolpoor, which belongs to an impoverished Syud family, Syud Poorah, held by a colony of poor Syuds, and Bhumbela, over-assessed, there is no village which has suffered seriously during the recent settlement. The reductions now made are chiefly owing to the half-asset principle; though, in a pergunnah so much dependent on the rains, I have been careful rather to fall below the mark. The Trans-Hindun villages seem to me to have been assessed at the last settlement in anticipation of the rajbuha which was shortly afterwards run out. Several of them in consequence were straightened previous to the introduction of canal water, and though they recovered rapidly and completely, any considerable increase, having been already anticipated, was at this settlement impossible.

7. There were Lumberders at the last settlement. There are now Appointment of Lumberdars and Putwarees. The Putwarees' Circles have been altered from to The pay of the highest is and of the lowest

8. From the accompanying statements it will be seen that transfers amount to about one-fourth of the whole area, and that the mahajuns have been transferees to the

extent of above one-half in the area transferred, or one-eighth in the whole pergunnah. The cultivating proprietors are as 2,046, against 1,734 in 1840, and the occupant tenants 2,014, as against 896. The average holding of the former is 10 acres; of the latter, 5 acres, 2 roods, 37 poles. The number of cultivators with right of occupancy has as usual increased. The average is rather larger than usual. The average of cultivating proprietors, here as elsewhere, is about 10 acres.

9. In the villages which were formerly included among the "Shurah Nukdee" villages, the particulars of which are known to the Commissioner and Board, money rents have now been fixed. I subjoin the results without reserve, as they show the best light that can possibly be procured on the fairness of my assessments:—

	<i>Ded. Rev. Rates. Jumma.</i>		<i>Assets.</i>
1. Dey Chund ...	889	937	493 acres rented at 2-5-9½ per acre, giving a rental for the whole cultivated area of Rs. 1,646. This land is average, but the rest of the land is held by other classes of tenants, or is seer, and the above rate is low for it.
2. Jut Nuglah ...	519	600	942. See Remarks in No. II. Statement.
3. Aklour ...	985	1,200	2,090 (93 acres culturable not included).
4. Kularpoor ...	765	631	408 acres let at Rs. 2-4-0 per acre, which gives Rs. 1,480 on the total area (see Remarks in No. II. Statement).
5. Kucholee ...	635	600	447 acres let for Rs. 1,038; 60 acres culturable and 18 acres (seer not included in this.)
6. Kotesrah ...	4,112	3,792	2,884 acres, the holding of occupant tenants, leased for Rs. 7,260, leaving a margin of Rs. 3,468. About 100 acres (seer land, and land held by non-occupant tenants) excluded from this.
7. Deedaheree ...	517	540	Rs. 947 rental would be the result of the money rent on the occupant tenants if applied to the whole area. But this rent is low for the seer lands (34 acres) and non-occupant tenants (41). The occupant tenants cover 381.
8. Muhmoodpoor ...	595	600	427 acres leased at Rs. 2-4-0 per acre, giving, if applied to whole cultivated area, Rs. 1,150; but this rate is low for seer land, of which are 66 acres. Allowing for this, the demand will be as nearly half as possible.

	<i>Ded. Rev. Rates.</i>	<i>Jumma.</i>	<i>Assets.</i>
9. Dudheroo khoord ...	1,211	1,097	The whole area leased to tenants for Rs. 2,179.
10. Dudheroo kulan ...	1,000	1,100	323 acres out of 754 leased to cultivators with right of occupancy for Rs. 971, giving a rate of Rs. 3-0-1 $\frac{3}{4}$, which, applied to the whole cultivated area, gives a rental of Rs. 2,266.
11. Bannugur ...	650	600	290 acres out of 604 are leased for Rs. 1-13-3 per acre, which, applied to the cultivated area, and 25 acres recently abandoned, gives a rental of Rs. 1,025.

The increase due to canal is estimated on the accompanying statement at Rs. 3,204.

MOZUFFERNUGGER :
January 8th, 1864. }

A. COLVIN,
Settlement Officer.

PERGUNNAH BUGRA.

THIS pergunnah is called after Rajah Bag (otherwise known as Rajah Bugra), whose name amidst various revolutions has never been lost. The Canoongoes' records go back as far as Sumbut 992, corresponding to the year of our Lord 935, and to the Hijree year 569, when Sultan Shahab-ood-deen, Gouree, conquering the Hindoo Rajah, "Rai Pattora," took possession of the pergunnah. Its succession continued in the line of the Gouree family (Taj-ood-deen, Shumsh-ood-deen, and others) upwards of four hundred years, until the time of Huzrut Timour, Mogul, who took Delhi in 800 Hijree, from which time the history of this pergunnah becomes mixed up with the reigning families of Delhi. A considerable portion of this pergunnah was included in the jagheer of Begum Sumroo, was settled in the Meerut District by Mr. Plowden, and subsequently transferred to Mozuffernugger.

2. The majority of the population consists of Mahomedan and Hindoo Jâts, Rajpoots, Tuggahs, Brahmins, Sheikhs, Syuds, and Mogul Puthans. The Mahomedan faith was adopted by the first-named classes (originally Hindoos), to acquire favor with the Emperors of Delhi. There are no large towns, the largest being Kusbah Bugra, with a population of about 3,724 souls.

3. The position of the pergunnah is unfavorable, between the two Rivers Kalee Nuddee and the Hundun; its eastern and western portions slope down to the above rivers, while the centre always remains high and dry, without any means of natural irrigation, and but little artificial from wells and tanks; consequently the drought in the famine year of 1860-61 was more severely felt in this and the neighbouring Pergunnah of Churthawul especially, and to a certain extent in Shikarpoor and Boorhana, than anywhere else in the district. The portion of Pergunnah Bugra situated Trans-Hindun is excepted in this description. Out of the 19 villages to the west of the Hindun, irrigation is carried on in 11 from rajbuhars of the Jumna Canal. The remissions and suspensions of revenue in Pergunnah Bugra during 1859-60-61 amounted to Rs. 7,970-12-9, while advances from charitable funds and succour money were distributed to the amount of Rs. 2,088-6-0.

4. At one time it was anticipated that the canal authorities would extend their irrigation from the Ganges Canal by a new cut *viâ* Deobund; indeed, the line has been surveyed throughout Bugra also: but the matter has been authoritatively decided by the Government, North-Western Provinces,—*vide* the orders of the Government on the Administration of the Canal for 1861. We need not, therefore, disturb our calculations by looking forward to any great improvement from this source. Should a cut be here-

after made, this pergunnah will be immensely improved ; the difference might then be taxed in the shape of an increased water-rate, but it need not stand in the way of a permanent settlement of the land revenue.

5. By the khusrah measurements the total cultivated area of this pergunnah amounts to 42,017 acres, of which 18,895 acres are irrigated (14,012 acres by wells and 4,883 by canal on the west side of the Hindun); and 23,122 acres are unirrigated : thus more than half the cultivated area is deficient in irrigation. Wells are comparatively scarce ; the cost of constructing masonry ones is said to be from Rs. 400 to Rs. 500 for two sets of bullocks, and from Rs. 250 to 300 for one set of bullocks. Kutchra wells can only be made in certain places, and cost from Rs. 25 to 30. 7,108 acres of culturable land is lying fallow, which the pergunnah authorities ascribe to the poverty of the malgoozars, desertion of cultivators,—in fact, to general distress, the results of the year of famine preceded by that of mutiny.

It was my wish and intention to have drawn out a concise account of the past fiscal history of this pergunnah, but I find that so many mouzahs have been introduced from the Pergunnahs of Churthawal, Shikarpore, and Boorhana, while others again have been transferred to those pergunnahs, that it is quite impossible, especially

* Many of these records were destroyed in the mutiny.

in the confused state of the Canoongoes'* records to give any idea of the rise or fall in the jummas of the successive settlements. A very imperfect list obtained from the Canoongoe is annexed. The hereditary Canoongoe of Bugra was one of those to whose lot it fell to come under reduction under the new arrangements of the Tehseelee establishments ; nevertheless he has been in constant attendance at my camp, and willingly given any information that was required of him. I have, however, ascertained quite sufficient of the past history of this pergunnah to convince me that a light assessment will alone enable the zemindars to recover themselves, while anything like severity will inevitably lead to desertion, to poverty, and to the increase of crime on the part of the Mahomedan Tuggahs, Rajpoots, and Jâts, all disorderly classes. The classes of the Hindoo persuasion are quiet agriculturists. The difficulties the zemindars have to contend with are, it must be remembered, great. First there is, in parts, the sandy, arid nature of the soil, the absence of irrigation, and the limited supply of manure ; lastly, there is the want of capital amongst the malgoozars, and desertion of cultivators. All these circumstances combined have impressed my mind with the conviction that the true interests of Government will be best secured by slightly relaxing the full amount of jumma derivable from the deduced revenue rates. This subject will be dealt with more fully in the remarks attached to each village statement. Suffice it now to say that this pergunnah has never been very prosperous, and until irrigation is more extended I cannot see how it is to improve. Applications will be made for advances to construct wells wherever these are deemed requisite, but the remedy will for the present be but partial ; considerable time must elapse before any great improvement can take place.

6. I look more to improvement from the zemindars themselves, by judicious expenditure out of the marginal profits which I believe I have equitably assessed, than from any wholesale assistance which Government can give. It is always advisable to avoid, if possible, Government agency in these matters. The people must be taught self-reliance. The misfortune is that in parts of this pergunnah the famine has so exhausted the zemindars as to make them in many instances absolutely helpless. Here, I take it, Government aid must be called in when solicited, and when satisfactory security can be given.

7. Mr. Edwards, Collector, has made the following remarks on Bugra :—" This is a very fairly prosperous pergunnah. I consider the best villages in it are Tutavee, Mundee, Mookundpore, Dhundaolee, and Khatowla. This last has a very light jumma,

and large profits are realized. The village of Peenah was formerly one of the best in the pergunnah, but it has latterly materially deteriorated,—so much so, that a portion of its lands have been in the market, and fetched but little, whereas some years back nothing would induce the people to part with a foot of the soil. The village behaved very badly in the disturbances, and had to be punished more than once, but not so severely as to have permanently injured the mouzah. The people are turbulent, and many of them arrant thieves. Both Burwala and Hursolee are also fine villages, with very extensive area. The former also behaved very badly in 1857. Kanownee may also be mentioned as a village of great capabilities." I cannot agree with Mr. Edwards in the above description, but rather with Mr. Lane, Deputy Collector, when, writing in 1861, he says,—“I have seen little prosperity in the pergunnah. Certainly the season has been singularly unfortunate, but at any time, with few wells and no canal irrigation, it can never bear a heavy assessment.”

8. In making rental estimates previous to assessment, I have been guided chiefly by Mr. E. Thornton's old circle rent-rates. These circles are Bugra, Churthawul, Jukhwala, and Kodana. Wherever the classification appeared to me incorrect, I have not hesitated in altering it: occasionally a good village had been under-estimated, and *vice versa*. The average rent-rates given by all these circles are—

For irrigated meesun, per acre	...	5	4	1½
„ unirrigated ditto,	„	...	3	13 6¼
„ irrigated roslee,	„	...	3	12 3¼
„ unirrigated ditto,	„	...	2	4 5½
„ irrigated dakur,	„	...	2	8 6½
„ unirrigated ditto,	„	...	2	0 2¼
„ irrigated bhoor,	„	...	2	4 5½
„ unirrigated ditto,	„	...	1	5 5½

These rates give rather a high out-turn to many of the middling estates which have suffered from the severe drought of 1268 Fuslee; to the better class of estates they can be applied most successfully.

9. Mr. Thornton's tables of appraisement, with one-fourth added for rise in the prices of agricultural produce, either to this estimate or the previous one, is not much to be depended on: with this addition, the estimate runs as high as the average of the “nikasees” is low. Messrs. Colvin and Grant think the fussil prices have remained stationary, although the retail prices of the bunneas have risen; and as it is only the value at the former rate which reaches the zemindars, few being able to store their grain until a favorable rise in the market should occur, it is not equitable to increase rental estimates by an anticipated enhancement in the value of agricultural produce. As I entertain considerable doubts on this subject, whether fussil or marketable harvest prices can possibly remain stationary, while retail traders are selling at a higher value, I have continued the practice which I followed in settling the Mozuffernugger Pergunnah of allowing a margin for a general rise in prices. I do not profess to have strictly followed this or any other estimate, for I have gone on an average of several estimates, as the most likely to be free from egregious blunders; and I feel confident that where I have erred it has been on the side of moderation. Close inspection of each village has materially guided me in apportioning the proposed jummas.

10. It is lamentable to think how incorrect have been the averages of the Putwarees' annual papers, notwithstanding the labor that has been given to instruct these officials, and to get correct returns of the condition and resources of each village. In Bhyachara villages, one could hardly expect the Putwaree to obtain a correct out-turn of each village and field, but that he should, as a rule, so grossly under-estimate the net produce was scarcely to be anticipated. Where the zemindars

are in the habit of letting out land at so much the kutchā beēgah, and these leases are entered in the nikasees, we can arrive at a very fair approximate rental; but these cases are not common. These leases, or "taahkees," as they are called, average from 10 to 12 annas per irrigated village beēgah, and 5 to 6 annas unirrigated. In the best villages, the rate is as high as one rupee for the former, and 6 to 8 annas for the latter; mostly, however, rents are received in kind, which makes the operation of discovering the rental produce a difficult matter.

11. I have pursued very much the same *modus operandi* which I have already mentioned in my report on Mozuffernugger. I have carefully visited every village in the pergunnah, collected its past history, taken a survey of the Khurreef crops of 1270 Fuslee, patiently heard all that the zemindars had to say for themselves, and classified the estates into three kinds. To the first I have fixed full rates, to the second a let-off from the circle rent-rate, and to the third, or worst class, I have given more consideration to the results got by an examination of the nikasees and the zemindars' statements of income actually received. Estimates, too, have been taken from the pergunnah officials; these placed side by side, and looking at the rates of the old jumma in the neighbourhood, I proceeded to assess at what I considered to be a fair demand at half assets.

12. The great difficulty I had to contend with in this pergunnah was the depressed condition of the majority of the zemindars; they are only just recovering from the effects of the famine which destroyed men and cattle. Take, for instance, the case of Sydpōora Khoord, a petty village close to Bugra. The malgoozars are impoverished Syuds. They broke down so completely in 1268 Fuslee that Rs. 870 had to be suspended. The soil is in parts sandy, in others there is good wheat land; no resident cultivators—only a few wretched hovels in which the Syuds live. The jumma was originally Rs. 270; at the last settlement it was raised to Rs. 667, which gave a rate on the malgoozaree acre of Rs. 1-1-5½. The past demand has been realized with the utmost difficulty. From the nikasees in good years we obtain an out-turn of Rs. 1057. Mr. Thornton's circle rent-rates go up as high as 1,700 odd rupees. Hurdeen Singh, Raees of Bugra, says the estate cannot bear a higher jumma than Rs. 450; the pergunnah officers propose a demand of Rs. 325. In consideration of the extreme poverty of the proprietors, and in the hopes that a light jumma would in the course of time bring them round again, I reduced the demand to below half assets got by the circle rent-rates,—viz., to Rs. 400,—which gives a rate on the cultivated acre nearly 9 annas cheaper than in the conterminous village of Bugra, with its large number of resident agriculturists and traders. I could not, under the circumstances, avoid this great inequality.

13. The old pergunnah jumma was Rs. 86,362, leaving out annas and pies: this at two-thirds, according to Mr. Thomason's principles of assessment, would give a net rental of Rs. 1,29,543, or a jumma at half assets equal to Rs. 64,771. The proposed jumma amounts to Rs. 81,670; so that, although there is a decrease on the past demand, there is really at half assets a considerable increase,—mainly due, of course, to excess of cultivation. The remarks against each village in the No. II. Statement will show my grounds of assessment. I have there endeavoured to dot down all the information I could collect which bore on the subject.

14. The number of transfers—30½ per cent.—is high. Out of 75 mehals, 18 entire estates only have escaped mutations of some kind or other, and the prices, both by private sales and decrees of Court, are so low that one is led to the conclusion that landed property in this pergunnah could not have been a desirable acquisition. The zemindars are, I fear, very much in debt to the buneess. It would appear that without the aid of the money-lender, who can exact any interest he likes, the zemindars are unable to acquit themselves of their dues to Government. As I moved through the pergunnah in the cold weather of 1862-63, the complaints against the usurious and fraudulent practices of the buneess met me in every village almost that I visited; and I

feel it my bounden duty to place on record my opinion that it is a most serious matter. It is one that must engage the deepest attention of every Collector who is at all interested in the welfare of the zemindars of his district. I am inclined to the opinion that a positive order from Government prohibiting sales of landed property for the recovery of debts would be a politic measure; or, if this be disapproved, I think the Civil Courts should be directed to resort to sales in a far less degree.

In the Pergunnah of Mozuffernugger, I found transfers numerous, and the complaints against the bunees equally loud; but I there gave it as my opinion that the Syud proprietors had brought it on themselves by their own extravagance. Nevertheless, as I become more acquainted with the facts, I may be allowed to qualify that decision, and I must say that there are very strong grounds for believing that the money-lenders have taken undue advantage of the ignorance of the agricultural classes of the country.

15. It will be observed that the jummas have fallen in that portion of the pergunnah which lies between the Rivers Kalee Nuddee and Hindun, while in the few canal-irrigated estates to the west of the last-named river there has been a slight increase. The revenue rates for the two portions Cis-Hindun and Trans-Hindun are as follows:—

				Rs. As. P.		
Cis-Hindun ...	{	Revenue rate per acre	malgoozaree ...	1	9	7½
		Ditto ditto	cultivated ...	1	14	0½
Trans-Hindun ...	{	Ditto ditto	malgoozaree ...	1	13	4½
		Ditto ditto	cultivated ...	2	2	1½

The revenue rates for the three classes of estates into which I have divided the pergunnah are—

Class I., or Superior Circle ...	{	Revenue rate per acre	malgoozaree	2	0	3½
		Ditto ditto	cultivated	2	6	5½
Class II., or Middle Circle ...	{	Ditto ditto	malgoozaree	1	14	0½
		Ditto ditto	cultivated	1	15	1½
Class III., or Inferior Circle...	{	Ditto ditto	malgoozaree	0	15	1½
		Ditto ditto	cultivated	1	3	9½

On the whole area of the pergunnah the revised demand falls—

Per acre malgoozaree	...	Rs. 1 10 7
Ditto cultivated	...	,, 1 15 3½

Although there has been a reduction of Rs. 4,671-8-3, still the revenue rates remain higher than in the neighbouring Pergunnahs of Mozuffernugger and Churthawul. The fact is, Bugra was fully assessed at the last settlement, while Mozuffernugger before the introduction of the canal had very light jummas indeed. It was not possible to entirely equalize the two pergunnahs, merely for the sake of an apparent conformity, without making either too great a reduction on the one side, or too heavy an increase on the other. Pergunnah Churthawul, although it greatly resembles Bugra, is, on the whole, more depressed.

16. Observing a very considerable sandy deposit in all the rajbuhās of the Eastern Jumna Canal which irrigate the estates Trans-Hindun, I wrote to Major Brownlow, Superintendent, to ascertain whether any injury was likely to occur from these annual deposits of sand. I was under the impression that, in the long run, the soil must become impoverished. Major Brownlow, however, writes that, so far from being deleterious, the deposits contain valuable organic matter calculated to improve the quality of the soil, and quotes as examples the slopes of deserted rajbuhās in the Meerut District, on which the finest wheat crops are grown. There can be no doubt, I think, that well water gives much heavier crops than canal water. All the zemindars agree on this point; and they admit, further, that a good deal of damage is done by the lazy way the people have of deluging their lands; but the question which of the two

kinds of irrigation; well or canal, is the most profitable, is of no practical utility, for the zemindars are now entirely dependent on the canal for irrigation.

17. The accompanying Pergunnahwar Returns will show the extent to which I have been converting rents from kind into money. By this process two most important objects have been attained: *firstly*, numerous disputes about the form of rents have been settled; *secondly*, a thorough insight has been gained as to the fitness, or otherwise, of the revised jummas. So complete has been the scrutiny that I have no hesitation in declaring the assessments to be equitable and in conformity to the half-asset principle. In all cases of dispute, rents have been fixed in cash according to the average of actual payments for similar lands in the neighbouring estates: so that if the jumma had pinched at all the truth must have come out; but I am glad to say that nothing has occurred to shake my confidence in the stability of my proposals.

18. The zemindars have not been backward in taking up the new jummas. Two only of the wealthy proprietors—*viz.*, Nowab Ahmed Ali Khan, of Kurnal, through his Mooktears, and Lalla Oodeyram, Mahajun, personally—complained against the severity of the demand in Caze Khaira and Peena; but as they were not assessed higher than their neighbours, and the estimated assets fully bore out my proposed jummas, I overruled their objections. These gentlemen seem to think the process of declaring and accepting jummas is a sort of auction, at which it is quite legitimate for the Collector, on the part of Government, to make the highest bid, and the malgoozar the lowest. I explained to them that the revenue is based on well-calculated data, and cannot be altered on such vague, flimsy objections as those under consideration. After some useless procrastination, the objectioners signed engagements. The Mahomedans of Chuk Maâfee, Kusbeh Bugra, gave some trouble. Their ancestors formerly enjoyed the land rent-free, and they thought they might as well battle with the Collector, to see how cheaply they could be let off, notwithstanding that the revenue rates were extremely light; and any argument on the subject was quite out of the question. Eventually these obstructive, clamorous people were obliged to yield the point.

19. The only other subject worthy of notice, as far as the assessment of this pergunnah is concerned, is the great number of Bhya-chara villages, chiefly Jât proprietors. It has been the custom to over-assess* these industrious communities because they produce a greater proportion of the valuable crops, such as sugar-cane, cotton, &c. This is manifestly unjust and impolitic. No doubt the resources of an estate must always be affected by the character of the proprietors and tenantry: a village owned by Jâts will always pay more than one belonging to the depraved class of Goojurs; still it is the interest of good government to encourage industry in every form, and not to tax unduly the profits of capital. Both my predecessor, Mr. H. G. Keene, and myself have been alive to the truth of this principle, and the result has been that these admirable Jât brotherhoods have now for the first time been moderately assessed, due regard having been paid to the provisions laid down in the Directions to Settlement Officers, paragraph 65; and paragraph 37, Appendix No. XX., Saharunpore Directions.

20. The usual statements—both those prescribed by the Directions to Settlement Officers, by the recent Circulars of the Board of Revenue, and others containing valuable statistical information—are submitted.

S. N. MARTIN,
Collector.

PERGUNNAH POOR CHUPAR.

(*Pergunnah Poor Chupar is bounded on the north by Zillah Saharunpore and Pergunnah Goordhunpore, on the west by Saharunpore and Pergunnah Mozuffernugger, on the south by Mozuffernugger, and the east by Bhokurharee and Goordhunpore.*)

In former times, upwards of five hundred years ago, a Caze, Syud Nizam, is said to have come from the direction of Persia, and to have established himself

at the town of Poor. Previously, during the incumbency of the Rājah of Pithora and other Hindoo Rājahs, the pergunnah was known by the name of "Chupar Khooda." The two names becoming blended, it is now generally called "Poor Chupar," and the principal town "Cazee-ki-Poor." The Canoongoe professes to trace the line of Hindoo Rājahs over a period of 4,181 years. The Mahomedans came into possession in 569 Hijree, corresponding to the close of the 12th century, and continued to 1167 Hijree, or A. D. 1773, after which there were constant revolutions between the Mahrattas and Mahomedans. The English rule dates from 1803.

2. The predominant classes are Jāts, Tuggas, Brahmins, Bheora, or people from the Deccan, Bhats, Soonars, Sweepers, and others. Families of Jāts and Tuggas are in groups,—that is, a dozen of these villages are to be found close together, all claiming one descent. When the pergunnah was re-cast in 1842, 62 mouzahs composed the whole area, bearing a jumma of Rs. 60,059; but since then a quantity of land has been taken up for the Ganges Canal, for rajbuhās and for roads, reducing the jumma to Rs. 56,947-3-0.

Of the 62 mehals, 48 are banghur, 8 kadir and banghur, 6 entirely kadir.

3. Although some estates have suffered from "choel," or percolation, this pergunnah has been generally considered to be more advanced than either of the neighbouring ones, Mozuffernugger or Bhokurharee. How fallacious this estimate is will be seen subsequently. It is computed that 1,336 cultivated and culturable acres have deteriorated by percolation, and yet by the measurements the cultivation has increased by 3,350 acres since the last settlement. The proportion of the better crops, according to the Ameens' Returns, is more than half the whole cultivation.

Of the cultivated area, 26,284 acres, or about 63 per cent., are irrigated; 14,819 acres, or 37 per cent., unirrigated.

The classes of soil composing the irrigated and unirrigated area are :—

Kind of soil.	Irrigated.	Unirrigated.	Total.	Per cent. to whole area.	Per cent. to cultivated area.
Meesran	9,903	640	10,543	18, or something less.	26 (a little less).
Roslee... ..	15,731	10,293	26,024	44½	63 (a little less).
Dakur	351	366	717	1, and something more.	1½ (a little more).
Bhoor	299	3,520	3,819	6½ (a little more).	9½ (a little more).
Waste and Minhaee...	17,596 acres		...	...	30

The above classification is from the Ameens' papers, and, like most of their measurements, errs in the description of soil. I am sure the "bhoor" land in this pergunnah is at least 14 or 15 per cent.

4. A very distinguishing feature of this pergunnah is the capricious course taken by the sand hills. At some places these hills run nearly parallel to each other, with an intervening distance of two or three miles; at other points they close in towards

each other, and everywhere are to be seen offshoots gradually sloping away till they meet the level of the surrounding country. Colonel Cautley, the projector of the Ganges Canal, in his report, attributes these sand hills to the action of wind. On the slopes corn and barley grow best, but should there be any deficiency in the rains the crops must fail. This year—1863—I observed that the plant was fast discoloring, owing to want of rain. The income from such lands is of course precarious in the extreme. Within these sand hills are to be observed channels which look very like the tortuous courses of rivers; in the hollows, the water which falls on the surface is retained a longer time, and hence their greater fertility. Examples of these are to be seen to the west of Chupar, in Koulahairee, and other mouzahs.

5. Judging from the accounts of the pergunnah officers, and also from the reports of Rai Nanuk Chund, Deputy Collector, who examined most of the villages, I was prepared to find this a highly flourishing pergunnah. I have personally inspected every village both on the bangur and the kadir lands, and taken notes of everything I saw or heard. To my surprise, I found in many villages that a great part of the area, though watered in parts from rajbuhas of the Ganges Canal, consists of sand called "bhoor," or "danda," and the soil is fit only for the most inferior Khurreef crops, such as bajra, mote, &c., and occasionally in the Rubbee, wheat and barley. Those estates in which "bhoor" land prevails have paid the past jumma, not without difficulty. In Kusbeh Poor, for instance, the revenue was never realized until an officer was specially deputed to the spot, and even then after great delay. Increase on the past demand to any great extent I saw at once was impracticable; the jumma could only be raised in those villages where there was less "bhoor" with increased cultivation, or where there were hollows retaining the surface water, as in Chupar and others, the soil being favorable to the production of good sugar-cane and cotton, and there being plenty of resident cultivators. From the list of villages annexed to this report it will be seen how very few I have been able to reckon amongst the first or best class; indeed, I think I should have curtailed the list as it stands. The few really flourishing estates are—

- | | |
|----------------------------|----------------|
| 1.—Burla. | 4.—Khooda. |
| 2.—Phulaoda (two puttees). | 5.—Kootubpore. |
| 3.—Chupar. | 6.—Khykheree. |

Out of sixty "khalisa" mehals, only these seven (Phulaoda has two completely separate puttees) possess all the elements which constitute superiority.

6. I entered this pergunnah backed by the experience gained in assessing Mozuffernugger, and was under the impression that, owing to the introduction of the Ganges Canal, an excess of at least Rs. 10,000 over the past jumma might be acquired. The pergunnah officers thought likewise, but it was evident that they had never visited the villages. The Canoongoe is certainly new to the pergunnah; he belongs properly to Mozuffernugger. Since the reduction of Tehseel establishments, his duties have been increased; so that he is now recorder of a new division.

The Tehseeldar, Syud Mahomed, is one of the "Raees," or old gentry of the district. I doubt very much if from this class really good Tehseeldars are ever procurable; at all events, those I have seen in this and other districts have been inferior officials. Syud Mahomed knows very well how to screw the revenue out of the people, but he is unacquainted with legal procedure or the duties of a Settlement Officer. I have not received any assistance from him in revising the settlement; whenever called upon for a report, the reply he has been able to furnish has been worthless; consequently I directed him to remain at his Tehseelee (he was subsequently removed to Allygurh).

7. Rai Nanuk Chund, Deputy Collector, an experienced officer in the Settlement Department, pitched his jummas a great deal too high; he was misled by placing implicit reliance on Mr. E. Thornton's chuk rates, adding one-fourth for the increase

of prices, which Messrs. Colvin and Grant think erroneous, because the fussil prices had really not risen since the last settlement. Mr. Thornton did not fix an irrigated rate for the Poor and Chupar Circles, because the irrigation in those days was nominal. The Deputy, therefore, took the "kunkoots," or appraisements, of a dozen or more villages, and obtained some rough "chittas" from the zemindars, from which he eliminated the following standard rates (summary) :—

			<i>Irrigated by Canal.</i>			<i>Unirrigated.</i>		
			Rs. As. P.			Rs. As. P.		
Rent-rates per acre	...	...	4	5	0	2	6	0

In this calculation there occurred this error, that the water-rate of one rupee paid by the zemindar to the Canal Department had not been deducted : omit this, and the rent-rates would be—

<i>Irrigated.</i>	<i>Unirrigated.</i>
Rs. As. P.	Rs. As. P.
3 5 0	2 6 0

About the ratio of 1 6 3 $\frac{1}{2}$ to 1 0 0

* This proportion was applied to the various kinds of soils. Well irrigation is almost entirely unknown in this pergunnah (*vide* statement of masonry wells).

* *Vide* annexure to General Report.

8. The pergunnah rental estimates obtained are—

By the quinquennial average of "Nikasees," excluding the exceptional year of famine Rs. 1,04,431

(Vide sample of process given in the Report for Mozuffernugger.)

By the summary rent-rates taken from records in the office ... ,, 84,962

By Mr. E. Thornton's rates of appraisement	1,42,369
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Ditto	ditto	circle rent-rates , 1,73,000*
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With a fourth added for rise in prices.

* (This I found too heavy and I was obliged to drop the addition of one-fourth to the circle rates.)

By Rai Nanuk Chund, Deputy Collector,
after deducting the portion of canal
water-rates paid by the malgoozars ... , 1,42,000

The most practicable of these estimates is the last one,—viz.,	} Rs. 1,42,000	
	„ 3,170	Deduct for extra cesses.

„ 1,38,830

„ 69,415 Half assets, or Govt. jumma.

The jumma I propose is Rs. 59,330, but then it must be remembered that I have ascertained that there is more bhoor and danda land than has been allowed for in the measurement papers, to which the average circle rent-rates according to Mr. Thornton cannot be applied. Secondly, the khadir estates bordering on the Solanee Nuddee have been completely destroyed by the action of percolation, while of the bangur and khadir estates, such as Noornuggur, Booncha, Mirzapore, Shahjehanpore, Jubbulpore, Godna, Godnee, &c., the bhangur lands only are now fit to cultivate. Even where canal irrigation is practicable, production is dwarfed by the sandy nature of the soil, and the crops on the bangur are further greatly injured by the ravages of the pigs and other wild animals which come up from the khadir every night, and return to their haunts before dawn. To prevent injuries as much as possible, licenses have been largely given to zemindars to carry arms.

9. Of the four classes of estates into which I have divided this pergunnah, the following are the rent and deduced revenue rates which I have assumed as my standard on the malgoozaree acre.

ON CULTIVATED AREA, PER ACRE.				ON MALGOOZAREE AREA, PER ACRE.			
<i>Summary rent-rate.</i>				<i>Revenue-rate of revised jumma.</i>			
*Class I.	...	3 12 0½		1 11 1		1 8 10¾	
Class II.	...	3 8 0½		1 5 6¾		1 2 11½	
Class III.	...	2 8 4¾		0 12 6¾		0 10 6	

Class IV., or "choel" estates. Of these I am unable to give any data, the revenue, nominal as it is, being collected from the sale of thatching straw and from grazing fees. In the rains the whole of these khadir estates are inundated, and during the dry weather the percolation is so extensive as to reduce the capabilities to *nil*. During the Khurreef of 1271 Fuslee, the khadir estates were all under water; not an acre was sown. For further information, *vide* file of correspondence.

The revenue-rate for the whole pergunnah is—

<i>Per cultivated acre.</i>	<i>Per malgoozaree acre.</i>
1 7 2	1 3 11½

The rent-rate for the whole pergunnah,—that is, the rate at which the standard rental for the entire pergunnah falls,—

<i>Per cultivated acre.</i>
3 8 6½

10. As I said before, I found the rent-rates high for so much bhoor land, and purposely fixed my jummas lower. By the Canoongoes' "kunkoots," or appraisements, for 1270 Fuslee, a pergunnah rental amounting to Rs. 1,26,669 was obtained; from this if we deduct the extra cesses, the pergunnah jumma would be about Rs. 60,000. Allowing that the appraisements were properly conducted, the result shows that the proposed jumma of Rs. 59,330 is not very far out.

11. I have followed the same mode of assessment in this as in the other two pergunnahs—Mozuffernugger and Bugra—previously settled and separately reported upon. I shall not repeat the process of induction by which an approximate rental has been obtained; the only difference in this pergunnah was, a rate for wet lands had to be discovered for the Poor and Chupar Circles; how this was done has already been explained in paragraph 7 of this report. The results of the present revision of settlement no doubt show a light rate upon the whole cultivated and malgoozaree area, and I purposely meant it should be so; for I am convinced, from a very close observation of every mouzah in the pergunnah, that a higher jumma could not have been realized without resort to coercive processes, ending finally in signal disappointment. A very numerous Bhyachara community hold most of the landed property, and wherever this is the case great caution is necessary.

12. The fourth, or Choel Circle, as I have called it, is very peculiar. It consists of two kinds. The first and better kind should include those estates which formerly had both bangur and khadir lands, the latter only having been lost by the action of swamp or percolation. The second kind consists of those where the whole area is in the khadir, and now completely destroyed by percolation,—the income, insignificant as it is, consisting of the price of thatching straw and scanty grazing fees. The jummas on the former estates might be retained; those on the latter are so completely nominal that I would recommend their being revised after five years,—*vide* correspondence regarding "choel" estates in Pergunnahs Goordhunpore, Poor, and Bhokurhai-ree.

13. The usual statements are to be found among the annexures.

S. N. MARTIN,

Collector.

P. S.—I have now had two years' experience of the settlement of this pergunnah, and I can confidently say it is neither too light nor severe. The average malgoozaree and cultivated acre rate may give the impression that the revenue is very

* The standard rent-rates for each class of soil have been given in the general report.

light. In practice such is not the case, and I can give the best proof of this. As Collector, and Manager of Minors' Estates, I have charge of shares in Busserah, the whole of Shukkurpore, Boocha, &c., property belonging to the minor Rajah of Landhoura. In no single case does the income exceed the jumma, and in very many cases I have not yet been able to bring the profits to an equality with the expenses. The fact is, the soil in this pergunnah is very poor indeed, much intermixed with sand, approaching what is well known as bhoor. Nothing but a very light assessment will ever answer. Mr. Wynne writes (demi-officially) that the neighbouring Pergunnah of Munglour, in the Saharunpore District, bears a heavier assessment. I do not know what sort of a pergunnah Munglour is, but I am quite sure of this, that at half assets I have gone quite high enough for Poor Chupar, and I would not increase the present settlement by a single farthing.

S. N. MARTIN,
Collector.

The 20th May, 1865.

No. .

FROM

H. G. KEENE, ESQUIRE,
Collector of Mozuffernugger,

TO

F. WILLIAMS, ESQUIRE,
Commissioner of Meerut Division.

Dated Mozuffernugger, the 15th March, 1862.

SIR,

THE District of Mozuffernugger is formed of part of the jagheer of the late Begum Sombre, and part of the old soobah of Saharunpore, the *Bawunee Mehal* of Nawab Zabitar Khan, whose seat was at Gousgurh, near Thannah Bhawun. It is bounded on the east by the Ganges, on the west by the Jumna, and is traversed longitudinally by three small streams running parallel to those rivers, and called the Kalee, the Hindun, and the Keersanee.

Between the Ganges and Kalee is a doab watered by the Ganges Canal; the Eastern Jumna Canal irrigates nearly the whole tract between the Jumna and the Hindun, but the central tract, or doab of the Hindun and Kalee, an area of more than a lakh and a quarter of acres, is at present dependent on the seasons, as are also the Pergunnahs of Bidhowlee and Goordhunpore, and parts of the other pergunnahs. The district is almost entirely agricultural, such towns as there are being chiefly supported by the sale of raw produce. Large quantities of sugar, cotton, and cereals are produced. Of the two former, about two-thirds are estimated to be exported towards Rohilcund and the Cis-Sutlej States, the eastern *entrepôt* being at Meeranpore, and the western at Shamlee. The income of the trading classes is under 25 lakhs per annum.

2. The present population of the district is about 580,000 souls, among whom there are about 27 per cent. of the Mussulman faith; nor is this simply owing to the large extent to which Syuds, Sheikhs, and Puthans have settled here during the days of Mahomedan supremacy, for the greater part of the Rajpoots and Goojurs are descended from persons who embraced the religion of their rulers. Among the Hindoos, the Jâts are the most numerous, though some of this tribe, too, are to be found among the Mahomedans.

3. The proportion of food crops is probably below the wants of this population, let alone a further batch of some 50,000, chiefly weavers, and such like, who are

excluded from the above reckoning, as having emigrated during the late droughts. I put the annual out-turn of food crops at 35 lakhs of maunds, or about 500lbs. avoirdupois *per annum* for each individual. The money value of the other articles—sugar, cotton, indigo, and fodder—may amount to a yearly average of 11 lakhs of rupees; or, say, in round numbers, a sum equal to the yearly Government jumma of the district.

4. *Preliminaries.*—On assuming charge in March, 1860, I found myself required to institute preliminary measures in view to the approaching revision of settlement throughout the 17 pergunnahs into which the district is divided,—my predecessor having had no time to do more than appoint a teacher for the Putwarees of Tehseel Thanna Bhawun.

5. I lost no time in starting the instruction of the Putwarees on a general system throughout the district, in which I had the less difficulty, having personally seen to the matter in 1854-55, when Deputy Collector. Mr. Colvin and Rae Nanuck Chund joined early in the following month, and gave me great aid; and the whole of the

* Collector's No. 148, dated 15th May, 1861. Putwarees were soon trained in surveying, as reported to your Office.* The boundaries were also adjusted and marked off according to the existing rules, at various periods in 1860, and during the first quarter of 1861.

The Canoongoes were also furnished, through the Tehseeldars, with a standard set of questions which they were required to answer in regard to each of the estates under their charge (on the 5th June, 1860). In October, interior measurements and plane-table surveys were commenced in three Tehseeldarees, and the khusra headings issued for record according to the Board's orders of 26th August, 1856. This work was constantly inspected, under my control and supervision, by European officers, and by Deputy Collector Nanuck Chund. The method of operation was witnessed by Mr. Muir and by yourself. We did not confine our scrutiny to completed surveys, but ourselves took part in the work from time to time, and in villages chosen quite at random. The officer inspecting a pergunnah was also provided with a note-book, in which I had inserted a map of the pergunnah on a scale of one mile to an inch, and

† Received from the Commissioner, 18th April, 1860. a transcript of such part of Mr. Edward's† notes as bore on the pergunnah or any of its estates. All but those watered from canals were at a low ebb of agriculture, and the results of the inspections were recorded, and subsequently used in preparing rolls for submission, in view to the suspension of revenue where it appeared necessary. The correctness of the survey is shown by its general accordance with that made under professional superintendence at the last settlement, any substantial difference being immediately the subject of detailed enquiry and explanation. This work was reduced to record, and subjected to analysis during the ensuing hot season; and the submission of the prescribed statements kept you acquainted with the progress that was going on.

6. In October last, the work of final inspection and assessment was set on foot. Before entering on any local details, it may be as well that I should briefly sketch the principles on which it was found necessary to proceed in ascertaining the condition and capabilities of the assets in reference to peculiarities in the local system. The general rules laid down in Mr. Thomason's Directions to Settlement Officers, paragraphs 47 to 51, and in the Board's Circular No. 1, were borne steadily in view, as enjoined in the Saharunpore Instructions. The latter part of Section 35 of those rules was the more easily obeyed by help of the Canoongoe's answers to the questions referred to above (in conjunction with the No. II. Statements),—all being checked by reports from the Collector's office, by Mr. Edward's recorded opinions, by the inspection notes of the officers, and by local knowledge. A further special examination of the peculiarities of each estate had also to be made at the time of assessment, particularly where the recorded facts and observations indicated any probable grounds for material alteration of the jumma. In this way a classified precis of information has been

obtained and recorded in English, such as cannot fail to be of great use to public officers stationed here for many years to come. But it was found that there were features attaching to the management of land in this district which might be made of peculiar service in gauging the value of any property under examination, chief of which I beg leave briefly to describe.

7. *Rental Estimates.*—For instance, it appeared that the classification of soils on the Goruckpore scheme formed but an imperfect index in Mozuffernugger, both by reason of the considerable prevalence of corn-rents, and of the arbitrary character of the results. Moreover, however well the soil might be classified, there remained this objection, that it only showed the state of the tillage during an exceptional period, when properties dependent on rain were nearly deserted, while canal villages were the scene of an unusually stimulated cultivation, caused by the high prices of produce. Land not under cultivation at the time of measurement would not, of course, be described (otherwise than as it might be “old” waste or “new”); and thus, if A were a Baranee estate, the malgoozar would have an opportunity of enhancing his poverty, as much as his neighbour of B on the canal would be subjected to an undue exhibition of prosperity, which would dwindle when the return of seasonable rain should send back to A the cultivators who had left it for temporary employment on B.

8. None of these objections applied to a classification of *rents*, according to the customs locally obtaining.

9. Rents in this district are of three kinds. For certain articles it is usual to take payment from the tenant in cash, at rates varying according to the article produced, and the greater or less fertility of the soil, and other similar conditions. These articles are noted in the margin, with their average rates of rent, taking one part of the district with another. Such rents are called “zubtee,” for what reason I am unable to say. The total amount, as above stated, is about equal to the

	Rs.	As.
Sugar, per acre	17	0
Cotton, ditto	8	8
Maize, ditto	4	0
Fodder	3	0

N. B.—This last article consists of Joar (*Holcus Sorghum*) grown thick, usually called *Churee*.

Government demand.

10. The second description of rents is that usually taken in kind or at estimated value for all the other kind of crops, including the whole produce of the spring harvest, as also the millets, *joar* and *bajra*, when grown for food. The proportion taken is, for the most part, rather less than half, though the full moiety is taken in some instances. This is called “nijkaree.”

11. The third kind of rent occurs where the habits or exigencies of the Malgoozars lead them to farm out patches of land to cultivators, often from other estates; who pay from 8 annas to 2 per local beegah* all round, whatever they may grow. This goes by the name “of tushkhees,” or fixed assessment. And when, as sometimes happens, this system prevails throughout an estate, we learn to a close approximation the value of the assets, and can assess, nearly or entirely, upon the rent-roll (*vide* Thomason’s “Directions to Settlement Officers,” paragraph 52).

12. Otherwise we only reach that portion of the rent which may be paid in money,—i. e., the *zubtee*, and whatever *tushkhees* there may exist; and the problem of ascertaining the value of the property is, on the whole, still unsolved, for the great difficulty, of course, is to learn the average amount of the nijkaree rental in such estates, in which very often the cultivation is almost exclusively in the hands

of the proprietary community. It has been admitted by superior authority† that the annual Putwarees’ papers are not capable of adoption “as the jumabundeas of settlement.” How untrustworthy they sometimes are I had an opportunity of showing, in 1860, in the

notorious case of Mouzah Bhynswal, Pergunnah Shamlee, where little more than a tenth part of the profits was entered in the *Nikasee* of 1267 Fuslee.

13. In order, however, to obtain a *minimum* capability for purposes of comparison, these papers were utilized as follows:—The total area and rental for five years being added up, and the latter divided by the former, a produce rate is obtained, the application of which to the cultivated area at the time of survey (adding any excess of new waste over and above the quinquennial average) gives the net produce according to the *Putwaree's* record. In order to check the tendency to under-statement, which is found to be universal, other plans were adopted; among them, an excellent one suggested by Mr. Auckland Colvin, which we call the *Reybundee*, and which may be thus described:—Retaining the quinquennial average of *zubtee* produce, which is founded on recorded money-rates, *nijkaree* average rates for the whole district are formed by the application of Mr. Thornton's appraisement to the mean quinquennial area devoted to the various *nijkaree* crops. The result is added to the *zubtee*, and the total far exceeds (in a majority of cases) that obtained from the *nikasee* rates. To render this estimate still more complete, I have caused it to be reckoned at the average prices current of each article for the ten years immediately preceding the great drought.

14. As, however, the necessity of filling up the No. III. Statement involved the classification of soil, and as this method undoubtedly furnishes a very useful standard of comparison, another estimate was formed by applying Mr. Thornton's circle rates to the classified area during the year of survey. This method is free from the objection applicable to the last named, which is founded on a district average of fertility; whereas, if the classification of soil be but correct, the application of the rates of a properly selected circle really shows the exact state and value of the cultivation, during the year under review, at the old revenue rates. To bring this into conformity with the other estimates, from 25 to 33 per cent. must be added, according to what there may be reason to believe was the Settlement Officer's principle of assessment. And it having been found that the average price of wheat has lately been ruling much higher than it did in 1840, it has to be remembered, in examining the No. III. valuations, that a further addition of about a quarter will be required to give a fair *jummabundee* in all estates where no special reason may be shown in the remarks for a lenient *jumma*. In the Pergunnah of Boorhana, the estimate thus formed is more than usually fallacious, because, not having been settled by Mr. Thornton, it had no rates available for expressing the supposed value of the different classes of soil but those of Mr. Thornton's nearest circle, and this had no necessary bearing on the question. This estimate, therefore, here, and in the estates of other parts similarly situated, was scarcely regarded at all in assessing; and the only way of giving reliable data in the No. III. Statement has been to add the *rental* classification below that prescribed. Thus, in Nuseerpore, we find the total value (according to the rates of the nearest *chuk*, that of *Shoron*) to be 890, while the *jumma* is Rs. 773 (and the *Canoongoe's* Dou 918, or more than the *whole assumed value*). The lower entries, however, show that the value assumed was in fact Rs. 1,086, on which my proposed *jumma* of Rs. 535 becomes reasonable, and the former *jumma* is shown to have been excessive. So, in Shadubur, the rental, according to soil, is 1,782, the *jumma* being Rs. 1,380. My assumed value was Rs. 2,254, and my proposed *jumma* is Rs. 1,131.

15. Local knowledge, and a careful investigation of the rent-rates, compared with the records of the Act X. files, will suggest many clues to the valuation of assets; and a *pergunnah* rate will be ultimately framed for irrigated land, and a second for the dry land. The application of this to the respective total areas forms a *pergunnah jumma*, the distribution of which over the various estates will be checked by constant reference to the other estimates, and its discrepancy in particular cases will supply hints for study on the spot.

16. Finally, I have found, in working after such men as Elliott and Thornton, that a proportional increase on their jumma-bundees, with a due allowance for the advance of prices since their day, will often yield a sum curiously corresponding to the results of other, and quite independent, estimates.

17. To illustrate the nature of these operations, I would beg examination of the subjoined specimen estimates taken from a number of estates which have no canal irrigation, and where the breaking up of new land, and the rise of ruling prices, are the only changes which have occurred since settlement.

POOR BALEEAN (JUMMA, Rs. 4,834).

I.— <i>Nikasee rates.</i>		II.— <i>Mr. Thornton's rates.</i>	
Zubtee,	Rs. 3,215		Rs. 3,215
Nijkaree,	„ 5,975		„ 10,775
	Rs. 9,190		Rs. 13,990

III.—*Circle rates, Rs. 11,004.*

IV.—*At Pergunnah rate, Rs. 12,380.*

V.—*Proportional increase, Rs. 10,433.*

Mr. Edwards left it on record that this estate would bear a “material increase of jumma.” This opinion is borne out by all but the first estimate; although the second, or *Reybundee*, formed on Mr. Thornton's rates, is in excess of the others. This is readily accounted for on visiting the property, which, after a minute and protracted examination, proved to contain a great deal of land of a quality below the average fertility. The jumma, therefore, though it should be raised, should not be so high as the second estimate would appear to indicate. Next let us take Nizampore (jumma Rs. 600). I., 841; II., 1240; III., 1205; IV., 1168; V., 1205. Here again the nikasee estimate fails us, but the others keep well together. The estate is of fair fertility, and is known to have borne the jumma well; the obvious inference being that it should be retained; the mean of the estimates, if we reject the first, being 1,204.

18. *Assessment of Pergunnahs.*—On the subject of assessment generally I have still much to say, but fear to trespass too long on your attention and that of the Board. A few general observations will be found at the conclusion of this report; but it is thought better in this place to say no more until some detailed account shall have been submitted of the way in which the assessment of past and present liabilities has been dealt with in the pergunnahs of which the prescribed statements are annexed.

19. *Boorhana.*—The first of these is Boorhana, a small division situated at the confluence of the Kalee and Hindun Rivers, at the extreme south of the district. This pergunnah formed part of the principality of Sirdhana, and was settled by Mr. Trevor Plowden when it lapsed to the British Government in 1839 by the Begum's death. It enjoys a soil in which kutchu wells can be sunk at small expense, and last many years, the water being about 12 yards from the surface in the upper, or *bangur* land, and not more than 8 yards in the *khadir*, or meadow land, which is also occasionally watered from the streams which it borders. Sugar, cotton, maize, and wheat are produced. The absence of *bajra* (*Panicum Spicatum*) indicates a good soil, and the marts of Sirdhana and Shamlee are accessible by good roads. The great drawback consists in the tendency of the drainage to cut ravines in its passage to two rivers, which gradually eat into the heart of the best lands. It is also to be observed that the rates on which Mr. Plowden based his assessment are rather high, ranging as they do from Rs. 2-6-5 to Rs. 6-6-5, especially as he took the full three-fourths for the Government demand. Hence almost of necessity it happened that many of the cultivators, and some even of the sharers in estates which were not adequately provided with wells, were unable to hold their own during the late protracted drought, which, as noted by Mr. Edwards, has prevailed ever since the disturbances of 1857 in

that part of the district. "So much so," adds that officer, "that the people have taken the idea into their heads that the locality is accursed, on account of their misconduct." Many of the refugees are still absent; while those who have returned are deficient in stock, in spite of the liberal aid administered by the Central Relief Committee, which was not adequate to the full extent of the evil. Above Rs. 15,000 were accordingly suspended, out of a total demand on the pergunnah of Rs. 75,148.

20. Assuming the Settlement Officer to have correctly estimated the rental assets (which, as above remarked, he perhaps a little over-rated), the value of the same on the present area, and with an allowance of 25 per cent. for rise of prices, would be about Rs. 1,41,100. As shown by applying Mr. Thornton's averages, and the ascertained zabtee rates, it is Rs. 1,36,385. Taking the latter as the basis of a pergunnah jumma, I obtained an average revenue rate of Rs. 1-14-11½ on the cultivated, and Rs. 1-9-5½ on the total malgoozaree, area; and in practice it was found that nearly half the estates were assessed at this average. Of the remainder, 13 went above, or at an average of Rs. 2-11-0 and Rs. 2-5-0 respectively, while only 10 were rated lower, or at a respective average *Estates. Proposed Jumma.* of Rs. 1-8-0 and 1-3-0. The loss to Government is upwards of 42 70,261 0 0 Rs. 5,000, but more than a third is due to the single estate of Jaola, which Mr. Edwards acknowledged to be over-assessed, and in regard to which I had the rent-roll to guide me, as it is wholly let on *tushkhees*.

The variations noted were essential, and for the most part natural, and will be found briefly accounted for in the miscellaneous general remarks, and more fully in my English Pergunnah Book in the office. It will be found that I have also adverted, in a few instances, to the probable inability of an estate to bear the full new jumma for one, or perhaps for two years to come. This refers to the results of the drought, and to my unwillingness to forego the demand that I believed to be appropriate. At the same time I was aware of the strong objections attaching to progressive, or *rusudee*, assessments, and preferred, in such cases, to undertake the responsibility of some small remissions, until the estates should have time to recover their springs of prosperity. (The total amount of these proposed remissions is Rs. 1,921.)

21. I have nothing more to note regarding the assessment of this pergunnah, except that, in anticipation of the possible extension of canal irrigation from the Hindun, and from the projected Deobun branch of the Ganges Canal, the engagements have been made terminable in twenty years, as ordered by Government last year (G. O. No. 2561A., dated 1st June, 1861). The assessments were completed before the collection of the Khurreef kists; and hence, in this pergunnah, the period of engagement dates from the 1st of last July; giving, contingent on sanction, an immediate relief to the distressed estates.

22. The balances of the former jumma have been arranged for on the same principles, *mutatis mutandis*, as the assessments for that which is to come. The result is exhibited in the subjoined table:—

Balances Requiring Remissions in Pergunnah Boorhana.

Village.	Balance, past years.	Balance, 1268 Fuslee.	Proposed Remission.	Remarks.
		Rs. As. P.	Rs. As. P.	
1. Burkuta	...	485 15 2	74 4 6	The remainder payable in two <i>fusls</i> . Rs. 172 of new jumma should be also remitted in 1269 Fuslee.
2. Bhowana	...	189 0 0	89 0 0	
3. Atalee	...	250 0 0	...	Rs. 125 in Khureef, 125 in Rubbee; Rs. 230 of new jumma should be remitted this year, and the old jumma paid for 1269 Fuslee.
4. Ookaolee	...	100 0 0	50 0 0	Rs. 50 in Rubbee, 1269 Fuslee.
5. Boorhana	...	1,300 0 0	400 0 0	Remainder by Kistbundee.
6. Bugeesana	...	675 6 6	200 0 0	In two <i>fusls</i> .
7. Toda	...	400 0 0	200 0 0	Rs. 200 in 1269, old jumma being paid.
8. Jaola	...	6,110 0 0	2,250 0 0	The remainder in
9. Jundheyree	...	225 0 0	...	By instalments.
10. Hubeepore	...	91 10 0	91 10 0	

Village.	Balance, past years.	Balance, 1268 Fuslee.	Proposed Remission.	Remarks.
		Ra. As. P.	Ra. As. P.	
11. H o s e y n a b a d (Bhumbara)	400 0 0	...	Ra. 200 in 1269, 200 in 1270 Fuslee, and <i>jumma</i> reduced.
12. H o s s e i n p o r e	347 7 5	...	Ra. 147-7-5 in Khureef, 200 in Rubbee.
13. R u s o o l p o r e (Dub-heyree)	200 0 0	...	Half in Khureef; half in Rubbee.
14. R a c e p o r e	100 0 0	100 0 0	Ra. 50 to be remitted out of <i>jumma</i> , 1269 Fuslee.
15. R e a o l e e N u g l a	250 0 0	250 0 0	Ra. 306 of <i>jumma</i> , 1269 Fuslee.
16. S u r a c e	234 11 3	34 11 3	Ra. 200 in two <i>fusls</i> , 230 of new <i>jumma</i> should be remitted in 1269.
17. K o o r t h u l	900 0 0	450 0 0	Ra. 450 in two <i>fusls</i> .
18. K o r a l s e e	1,400 0 0	700 0 0	Ra. 700 in two <i>fusls</i> .
19. K h u r u r	470 3 3	...	In Rubbee, 1269 Fuslee.
20. M u n d w a r a	250 0 0	...	Ra. 125 in 1269 Fuslee, 125 in 1270 Fuslee. Ra. 148 of <i>jumma</i> 1269 to be remitted.
21. N u g w a	500 0 0	240 0 0	Ra. 260 in four <i>kists</i> .
22. W a c e l e e	143 9 9	...	In two <i>fusls</i> .
23. M u n d a o l e e	Ra. 125 of <i>jumma</i> , 1269 Fuslee, should be remitted.
Total	

23. *Gordhunpore*.—In December, having completed these operations, and deputed a Deputy Collector to prepare the records of rights, rent-rolls, and administration papers, I turned towards the north-east corner of the district, where Nanuck Chund had been for some time engaged in preliminary observations. The necessary records having been first completed in Gordhunpore, that pergunnah was the next for assessment. It is an unhappy tract, out on the east by the Ganges, and swamped on the west by the Solanee. Between these two rivers, however, is a patch of high land,—a sort of inverted oasis,—on which the best estates nearly equal the worst in the pergunnah last described. The whole is occupied, almost exclusively, by Goojurs; but they are of comparatively inoffensive habits;—only the same lack of energy which is shown in their crimes unfortunately also exhibits its effects in their cultivation. They have no want of water, but are otherwise badly off, and eke out a subsistence by selling straw for thatch, and by grazing herds of cattle, which pay a tax of four or six annas per head,—or per tail, as the phrase goes.

24. The natural features of the pergunnah divide it almost of necessity into four circles, each containing a nearly equal number of estates, but in which the cultivation bears a varying ratio to the whole culturable area,—see the margin. The old rates were Re. 1-4-6 on the cultivated area, and 10 annas 9 pie on the total malgoozaree; but the new classification

Estates.	Malgoozaree area, acres.	Cultivated area, acres.
I.—19	9,964	7,978
II.—18	8,490	2,744
III.—15	10,783	3,910
IV.—17	4,422	1,487

elicited widely varying rates, viz. :—

I. Varied on cultivation ...	1 7 5½	On Malgoozaree ...	1 2 5½
II. „ ...	1 1 2	„ ...	0 5 6½
III. „ ...	1 2 3½	„ ...	0 6 7½
IV. „ ...	1 4 10½	„ ...	0 7 0½

which were used as a standard in each circle, and only departed from for special reasons explained in the proper place. The two former circles are the “good” and “indifferent,” only in a pergunnah itself entirely below par. The two latter demand more notice.

25. Class III. consists of estates some of which are periodically injured by the Ganges, while others are out by tributary streams, which discharge a considerable

volume of water during the rainy season. The inroads of the latter can, I believe, be certainly checked by the construction of cheap and simple regulating works, which an Engineer could readily place at the most exposed points with a little aid from the villagers. I have erected a small experimental piece of crib-work under the inhabited site of Tonda Jelalpore, on which the current of the Bangunga had been setting with some strength. The action of the Ganges is similar, though of course more formidable. It cuts away the lower parts of the scarp bank, and as soon as these are undermined, the cultivated surface falls into the river, to be re-produced on the Bijour side in the form of barren sands. This also, as I cannot but think, could be dealt with, though the breakwaters must be on a larger scale than those required for the treatment of the tributaries. The total area subject to this species of decrement is, however, very small, and has not therefore been made the subject of special settlement, though the circumstance has probably a depressing effect on the whole condition of the estates and people.

26. The swamp circle (IV.) is still more amenable to remedial treatment.

Circular P. P., dated 17th October, 1856.

Simple drainage is here needed; and I have entered, meanwhile, a condition in the engagements, founded on the instructions noted in margin.

27. The second section of the orders referred to provides that when any considerable tract is liable to fertilization from fluvial deposits it shall be treated separately, and, in the event of its becoming fertile, subjected to the ordinary rules of settlement as alluvion.

28. The tract referred to will become fertile whenever the demand for agricultural produce and the redundancy of the labor market shall render it worth the while of the Malgoozars to reclaim it by draining. Accordingly, a clause has been introduced into the engagements, by the consent of the Malgoozars, to the effect that, whenever such lands shall become fit for cultivation, they shall be liable to assessment according to the rules for alluvial accretions. The Malgoozars further expressed their willingness to drain the lands at once, if the Canal Department would furnish them with correct levels; such lands, 343 acres in all, are entered as "Minhae" in the papers of the estates to which they belong, being at present incapable of bearing so much as one crop in the course of the year; it being found, in regard to the remaining lands, that though the winter sun is not of sufficient power to dry them, or to fecundate the seed for a Rubbee crop, yet (in seasons of late and scanty rain-fall especially) they produce a rather good quality of rice, known locally by the name of "Moonjhee." Such land is of course *culturable*, and sometimes was measured and recorded as within the *cultivated* area, though a want of labor and of energy probably keeps the landholders from availing themselves of this somewhat precarious resource to the fullest extent possible. It is a speculation to sow even rice in spongy

* The measurements of the whole pergunnah only show 339 acres of irrigation, being on the high lands in the Gordhunpore Circle.

land, where any redundancy of water will surely swamp it; yet it is matter of sincere regret to see many thousand acres of fine soil, quite independent of artificial irrigation,* subject to great and growing deterioration. Till lately, the Solanee flowed down the backbone of the pergunnah, but has now found a lower and more direct channel in the land already swamped by the percolation from the Ganges Canal; and the swamps in that chuk are steadily increasing their area.† An attempt made by the people of Nanoopore to run off the surplus water into the Solanee failed, from want of due levelling, and the water of the Solanee is said to have poured back, on the contrary,

† Minhae land at settlement, acres 1,815.

Ditto at present, 2,212.

(There is also a great deal of land deteriorated; that is, it only bears one crop, and that a poor one, during the year. But as it is not entirely barren, it has not been thought necessary to exclude it from assessment or record.)

into their lands, where it enhanced the evil: however this may be, I have myself seen the abandoned cut. This readiness of the people is, however, a hopeful sign; and I trust they may obtain correct levels and instructions

from the Canal Department, which may not only check the evil, but lead to the reclamation of land now swamped. They will be prepared to pay an enhanced revenue at their present rates, on such land being added to their cultivated area in a ratio above 10 per cent. Meanwhile, though due relief has been given where needed, the

* Present jumma ... Rs. 19,623
Proposed ditto ... „ 19,748

total jumma of the pergunnah, should my proposals be approved, will not fall short of what has been hitherto realized ;* while the increase of the cultivation (from 15,447 to 16,000 acres) has caused the rate on cultivation to fall from Rs. 1-4-6, previously noted, to 1-3-7½. Deputy Collector Nanuk Chund estimated the jumma at Rs. 21,000 (from which I obtained the standard rates given above), and the small difference between my total and his is due to the modifications I found occasion to make in particular cases. The following are the arrangements which I would propose in regard to the balances in this pergunnah : —

Village.	Balance, past years.			Balance, 1268 Fualac.			Proposed Remission.			Remarks.
	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.	
Idreespore ...	...	...	...	44	0	0	44	0	0	Jumma reduced on account diluvian.
Badshahpore ...	212	0	0	...	...	...	212	0	0	Ditto.
Baakoontpore ...	64	13	6	...	...	...	64	13	6	Swamped; jumma reduced.
Jheewurheyree ...	...	...	...	...	...	...	...	...	...	Rs. 61 to be remitted in 1269 on account of swamp.
Chukheyree ...	...	...	...	1	8	0	1	8	0	This estate has been swept away by the Ganges.
Dadoopore ...	42	12	0	...	...	...	42	12	0	Jumma reduced on account of swamp.
Kowulpore ...	...	...	...	...	...	...	...	...	...	Rs. 15 to be remitted in 1269 on account of non-produce.
Mahpore ...	24	0	0	...	...	...	24	0	0	Jumma reduced on account of swamp.
Morabeyla ...	...	...	...	79	0	0	79	0	0	Ditto.
Nuroo Muzra ...	37	0	0	...	...	...	37	0	0	Ditto.
Total ...	380	9	6	124	8	0	505	1	6	

29. *Shoron Shikarpore*.—In this pergunnah of *Shoron Shikarpore* there are 59 estates, of which 24, forming part of the old Sirdhana Jagheer, were settled by Mr. T. Plowden, and, I presume, on the same principles which he adopted in Pergunnah Boorhana.

Another portion, including the whole of the Trans-Hindun estates, was settled by Mr. H. M. Elliott, whose method is described in the same report which contains Mr. Plowden's narrative, and which has been lately reprinted and circulated by the Board. The remainder were part of the charge of Mr. E. Thornton, who settled the greater portion of this district, as set forth in his report, also lately re-produced.

30. Few peculiarities call for detailed notice. It will be remembered that all the tract between the Kalee and Hindun Rivers is at present dependent on the seasons for its supply of water. About three-fourths of this pergunnah are included in this tract, and on this, if on no other account, an increase of revenue is hardly to be looked for. But inequalities, whether previously overlooked, or only of recent occurrence, would necessarily demand adjustment. Variations from average of fertility would be mostly what they were at settlement, and due allowance would have been usually then made. But I think that undue regard may sometimes have been had to other and more casual variations, and this I have attempted in some degree to modify. As to soil, it is to be observed that some part of the Cis-Hindun tract is crossed by a *bhoor*, or belt of sand hill, which adds to the already noticed absence of canal water,—the further disadvantage of poverty of soil (and impossibility of sinking earthen wells) as far as it extends. In other parts, however, the soil is of excellent quality, except that near the rivers it again becomes poor, and is so uneven as almost to deserve the title of “hilly;” but it is mostly tilled (as is also a good deal of the *bhoor*), and produces wheat, barley, and *bajra*. The *khadir* land also contains the fossil alkali known as *reh*, the presence of which the people whose estates border the Kalee Nud-

dee attempt to attribute to the tailing into that stream of escapes and rajbuhās from the Ganges Canal on the opposite side. This explanation, however, I strongly doubt, for I have found the substance at a depth of six feet below the surface, the upper stratum being quite free; and I know of no reason for disbelieving that the Kalee is itself a medium for its deposition. If it were the canal that, for the first time, brought down the *reh*, it would, I think, only be found in recent and superficial layers, the main canal having only been opened in 1854. The *khadir* fields are also secure against drought; indeed, some of them are swamped, like those in the Solanee *khadir*, during the present season. But they produce crops of sugar and rice, which, though of inferior quality, and paying a lower rental than *bangur* crops, are not precarious. The upper country, in the hands of Jāts and Tuggas, yields excellent crops of sugar, wheat, cotton, and *joar*. The assessments, too, have on the whole pressed less heavily than in some parts of Boorhana, and the rates on which the old jumma of the pergunnah falls on the cultivated and culturable area may still be taken as a fair standard, being, respectively, Rs. 2-4-3 and Rs. 2-0-2. Undoubtedly there is a difference between the circumstances of the Cis-Hindun, or *Shoron* Proper, and the Trans-Hindun, or *Shikarpore* tract; and this calls for some discrimination in distributing a pergunnah jumma. The tract beyond the river is not free from ravines, but it has them only on one side, instead of on two sides; and not only has it no *bhoor* belt, but it has a considerable share of canal irrigation. It has the further advantage of having been all assessed by one, and that a very able, officer (the late Sir H. Elliott), while the malgoozaree communities are almost exclusively industrious and thriving Jāts. Whether any further development of irrigation is to be expected I am not aware; but as I know that a survey is on foot, with a view to the feasibility of a cut from the Hindun, on this ground, as also for the sake of uniformity, I have taken twenty years as the minimum period of all the engagements. I do not, however, feel justified in reckoning on any very certain extension of the capabilities of estates in this neighbourhood. Their resources are great, but they have been fully taxed, and the absence of confidence in their increase appears to preclude any general increase in their taxation.

31. The margin shows the rates which have been chiefly used in the Cis-Hindun

<i>Shoron rates.</i>	
Irrigated.	Dry.
2 14 0	1 6 0

or *Shoron* tract. This rate is the result of experience, and compares well with the calculations obtained by the means

<i>Shoron 2nd Class rates.</i>	
Irrigated.	Dry.
2 8 0	1 2 0

indicated above. In second-class estates, however repugnant to abstract ideas, it has been sometimes absolutely unavailable to frame a lower rate before this conformity could be obtained; and special remarks will be found in the appropriate place. But great pains have been taken to look as much to essential variations, and as little to those which were accidental, as the nature of things permitted with which I had to deal. Above every other consideration, that of *permanency* had place; it being hoped that the Board and Government would be pleased to think that, where no imperative reason for change was shown, existing obligations should be as little as possible disturbed, and the advantages of a perpetual settlement, as far as possible, secured. No jumma has been subject to such an enhancement as would be likely to be thought frivolous or vexatious by the people; but where Mr. Edwards' recorded opinion in favor of substantial increase was corroborated by an ascertained large development of cultivation, and by the admitted or obvious prosperity of the Malgoozars, in such, and in similar cases, a fair rateable addition to the demand was considered a just protection of the public interests committed to

my charge. The practice reprobated by the late Lieutenant-Governor* has been ignored as much as its persistent recognition by all classes of the native community would permit. Not only in this, but in most pergunnahs that I have had to deal with, I have found officials recommending high assessments on particular estates, simply and solely because they were held

* D. S. O., paragraph 65.

by wealthy individuals or by industrious tribes; while the Malgoozars, for their part, lay great stress on their want of capital and other personal disadvantages. Each class seems disposed to regard the land revenue as a kind of Income Tax, rather than what it really is, the landlord's rent. Doubtless the hereditary claims of the Malgoozars form a source of sentimental influence which is hard to resist, but it cannot be indulged beyond the limits imposed by the alternative necessity of allowing a malikana. Otherwise we must, by parity of reasoning, be driven to place an exorbitant demand on estates when they happen to be held by persons of more than usual energy and enterprize, which is equivalent to the manifest absurdity of treating penally the exhibition of merit and resource. Hence, in the Shoron sub-division of this pergunnah, I have sacrificed many small increments which were recommended to me, having regard to the "casual variations" of Mr. Birch.* On the

* *Vide Circular I., Section 4, paragraphs 91 to 97.*

same principle, palpable idleness on the part of the proprietary body has not been held to constitute a claim to indulgent rating. This subject will be noticed again, under the head of "General Observations," when I come to notice the habits of the various tribes which are most prominent in the agricultural population of the district.

32. *Shikarpore.*—The Shikarpore portion of this pergunnah, as already remarked, is separated from that of Shoron by the Hindun, a deep river with steep banks; and I have lately had the honor to submit a special suggestion that it be thrown into the Trans-Hindun part of the Boorhana Pergunnah, whose Cis-Hindun villages, on the other hand, might be added to Shoron. In the meanwhile, besides other conditions noted above (paragraph 29), its chief feature is the possession of canal irrigation; the

Ulawulpore.	Shikarpore.
Moondbhur.	Jeytpore.
Sissalee.	Gurhee.
Bhowra Kulan.	Ghurfoogurh.
Ditto Khoord.	Mahomudpore.

ten villages noted in the margin being under the influence of a rajbaha from the Eastern Jumna Canal. Mr. Elliott's assessments, though fair according to the rules in force at the time, do not leave to the Malgoozars, in all cases, their full moiety of the profits; nor is there in general much capacity of farther development in these estates. Rs. 3-10 has been used as a standard rate on irrigated, and Rs. 1-8 on dry, cultivation. The subjoined memorandum exhibits the way in which it is proposed to arrange for balances (some of which, it will be observed,

Former jumma, Rs. 1,06,109. have accrued in estates ordinarily watered by canal, though
Present jumma, Rs. 1,03,361. the supply ran short during the late droughts):—

Villages.	Balance, past years.	Balance, 1908 Fus- lee.	Remis- sion.	Remarks.
		Rs. As. P.	Rs. As. P.	
1. Unchoura	...	50 9 0	...	Deficiency of produce.
2. Bhowra Kulan	...	289 10 0	...	Ditto in two fusls.
3. Busdhara	...	570 12 0	570 12 0	Ditto and over-assessment; Rs. 227 of new jumma to be remitted.
4. Pooruh	...	100 0 0	100 0 0	Deficient produce.
5. Jeytpore	...	21 0 4	...	Ditto two fusls.
6. Khanpore	...	122 13 2	50 0 0	The remainder in two fusls.
7. Dhundaolee	...	100 0 0	50 0 0	
8. Saotoo	...	25 9 1	...	In fusl rubbee.
9. Shikarpore	...	597 5 0	...	In three fusls.
10. Oomurpore	...	160 15 6	150 0 0	Rs. 10-15-6 to be collected.
11. Kumalpore	...	64 8 0	50 0 0	The remainder to be realized.
12. Kheyree Soondean	...	55 8 0	55 8 0	
13. Gurhee Noabad	...	49 4 0	...	In fusl khureef.
14. Mahomedpore, Roy Sing	...	800 0 0	400 0 0	Rs. 400 in two fusls.
15. Mundaalee	...	83 3 6	83 3 6	
16. Hulolee	...	876 9 6	200 0 0	Rs. 676-9-6 in two fusls.
Total Re-	...	3,967 11 1	1,709 7 6	

33. *Bedolee*.—The condition of this pergunnah has been so fully described by Mr. Colvin that I have thought it right to let him speak for himself, by annexing the report with which he has favored me; and it is due to him to mention, once for all, that, beyond concerting general principles, and consulting with him on any special points that arose, I have not interfered in the assessment.

34. It will be seen from Mr. Colvin's Report that he has paid very great attention to acquainting himself with the peculiar conditions with which he had to deal. He has indeed spent a considerable part of the last two seasons in the pergunnah.

35. The 2nd Appendix to his Report shows that the disadvantages under which the pergunnah at present labors have an effect on the rates of profit as indicated by the decrees of the summary-suit file during three years ending 1266 Fuslee. The produce of wheat, barley, and gram was about 30 per cent. below what Mr. Thornton had established as the average yield throughout the district; the "zubtee" rates are still lower. This being so, he might have preferred not to take Mr. Thornton's average produce rates as the basis of his assessment (as explained in his 12th and 13th paragraphs), but that he was aware that, not only was a development of the produce to be looked to from an extension of the area of tillage, but the 1st class of soil (locally called "meetsun") would be largely increased whenever the people chose to apply to the "rouslee" a portion of the manure which is so plentiful in this pastoral tract of country. The soundness of his judgment is evinced by the fact that, although he has secured to the Government some share in the prospective capabilities of these depressed estates, he has given general satisfaction to the Malgoozars. That the pergunnah jumma has considerably decreased is chiefly owing to the action of saline efflorescence, whereby the total malgoozaree area has been curtailed; while to this reduced area he

Present jumma.	An old malgoozaree rate.	Proposed jumma.
Rs. 42,656	Rs. 40,131	Rs. 28,838

Balance of past years.	Balance of 1269 Fuslee.
Rs. 10,032	Rs. 32,128

has still been led, by the circumstances explained in his paragraphs under notice, to apply a reduced rate, *vide* the marginal statement.—It must not be omitted that the present jumma is quite nominal, and that the balances indicated in the margin exist to show how heavily it has lately been pressing; and this is to a great extent independent of the late droughts, which, owing partly to the scanty population, and partly to the fact that there is scarcely any cultivated land that is not dependent on the vicissitudes of the seasons, did not bear severely on this pergunnah. The annexed table shows that the whole difference between the produce of the pergunnah in an average year and in a year of drought was not 8 per cent., and that chiefly attributable to emigration.

Proportion of wells to cultivated area in acres, 1 to 20; besides meadow land in the Jumna Khadir.

the whole difference between the produce of the pergunnah in an average year and in a

Years, Fuslee.	Crop, maunds.	Value.	Zubtee.	Total.
		Rs.	Rs.	Rs.
1265, ...	57,766	27,192	16,078	43,270
1267, ...	31,644	23,512	16,126	39,638

to introduce a period of twenty years into the engagements, as has been done in Boorhana and Shikarpore. The words equivalent to "or till further orders" being added, the Government is at liberty to continue the arrangement as long as it may think fit; but should irrigation of this kind be extended into the pergunnah, Government will likewise be at liberty to make fresh arrangements ten years sooner than had the usual period been adopted.

Subjoined is a list of balances and proposals regarding them.

Village.	Balance, past year's.			Balance, 1268 Fuslee.			Proposed Remission.			Remarks.
	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.	
1. Oodpore ... ..	...	...	...	...	27	11 0	...	...	...
2. Undherah ... ..	...	...	...	...	168	0 0	...	...	...
3. Oadree ... ..	...	...	...	6	3 0	243 0 0	...	...	...
4. Ushrupore	399	5 0	...	...	450 0 0	...	450	0 0	...	
5. Oalahnee ... ..	...	...	...	...	348 0 9	...	...	...	...
6. Bhuttee Muzra ... ..	...	...	...	...	69 9 6	...	...	...	...
7. Bhurree ... ..	...	...	...	...	1,306 12 0	...	65	6 12	...	
8. Bhogee Muzra ... ..	...	...	...	...	222 11 3	...	...	...	...
9. Bulla Muzra	75	7 3	...	...	650 0 0	...	345	0 0	...	
10. Bhao Muzra	90	11 3	...	...	450 0 0	...	252	0 0	...	
11. Bullaedeih ... ..	...	...	...	...	604 0 0	...	216	0 0	...	
12. Bedolee	43	13 3	...	1,883	1 9	...	942	12 0	...	
13. Beena Muzra ... ..	...	...	...	...	340 0 0	...	...	...	...
14. Tiasung ... ..	...	...	...	...	132 14 0	...	...	...	...
15. Chuttaelah ... ..	...	...	...	...	446 9 3	...	189	0 0	...	
16. Jejoulch	22	7 3	...	...	675 0 0	...	307	0 0	...	
17. Julalpore	1	15 0	...	...	185 0 0	...	...	...	...
18. Chondeepore ... ..	...	...	...	...	37 11 9	...	...	...	...
19. Chousana, Bureeah, Bichleeah	...	...	...	...	439 15 6	...	...	...	...
20. Chousana Lahoreeah	...	...	...	...	1,197 11 3	...	...	...	...
21. Qhuajpoorah ... ..	...	...	...	...	225 8 0	...	102	0 0	...	
22. Duburkee ... ..	...	...	...	...	380 0 0	...	380	0 0	...	
23. Dhakwala ... ..	...	...	...	...	253 0 6	...	68	12 3	...	
24. Dilaweruh ... ..	...	...	...	...	191 13 3	...	...	...	...
25. Donkpoora ... ..	...	...	...	...	136 0 0	...	...	...	...
26. Dubheyree Boozoorg	...	...	...	...	175 0 0	...	175	0 0	...	
27. Rusoolpore ... ..	...	...	...	...	...	...	...	...	...
28. Raepore ... ..	...	...	...	...	2 0 0	...	...	...	...
29. Ruttond	104	6 3	...	...	400 0 0	...	...	...	...
30. Sukhotee ... ..	...	...	...	...	602 4 0	...	...	...	...
31. Seetul Gurhee ... ..	...	...	...	...	783 0 0	...	...	...	...
32. Seengrah ... ..	...	...	...	...	200 0 0	...	...	...	...
33. Soobree ... ..	...	...	...	...	44 15 9	...	...	...	...
34. Sudurpore ... ..	...	...	...	...	387 14 0	...	...	...	...
35. Alipoorah ... ..	...	...	...	...	232 0 0	...	...	...	...
36. Azeerpore ... ..	...	...	...	...	414 13 6	...	248	0 0	...	
37. Futtehpore	26	8 9	...	...	420 0 0	...	208	0 0	...	
38. Kontulpore	106	8 9	...	...	350 0 0	...	350	0 0	...	
39. Khor Suma ... ..	...	...	...	...	36 0 6	...	...	...	...
40. Kubeerpore	37	15 6	...	...	476 0 0	...	...	...	...
41. Kalanuzra ... ..	...	...	...	...	291 3 0	...	147	0 0	...	
42. Kumalpore ... ..	...	...	...	...	185 10 0	...	...	...	...
43. Kertoo ... ..	...	...	...	...	362 15 6	...	...	...	...
44. Koolheyree ... ..	...	...	...	...	583 14 0	...	304	0 0	...	
45. Kheyree Zoonardar ... ..	...	...	...	...	203 0 0	...	...	...	...
46. Goojurpore ... ..	...	...	...	...	180 1 0	...	...	...	...
47. Laloooorah Ruhmanpore	35	10 9	...	...	708 0 0	...	354	0 0	...	
48. Munglourah ... ..	...	...	...	...	216 10 0	...	...	...	...
49. Moostafabad	92	2 9	...	...	1,716 0 0	...	1,716	0 0	...	
50. Mean Qusta	2	5 0	...	...	816 0 0	...	...	...	...
51. Munsooruh ... ..	...	...	...	...	858 0 0	...	483	0 0	...	
52. Moondee Gurhee ... ..	...	...	...	...	875 12 0	...	671	12 0	...	
53. Nae Nugla ... ..	...	...	...	...	253 7 6	...	...	...	...
54. Nugla Megha ... ..	...	...	...	...	621 0 0	...	621	0 0	...	
55. Nulwee ... ..	...	...	...	...	388 0 0	...	...	...	...
56. Nuseerpore ... ..	...	...	...	...	...	...	...	...	...
57. Yaheapore ... ..	...	...	...	...	431 8 0	...	...	...	...
58. Yoosufpore, Julalpore	8	15 0	...	...	1,000 0 0	...	469	0 0	...	
59. Shapore Muzra Yaheapore	85	4 3	...	...	255 6 0	...	225	6 0	...	
Total Rs. ...	1,139	11 0	...	25,438	8 6	...	9,911	6 3	...	

There are no other pergunnahs of which the papers are sufficiently forward to enable me to submit the prescribed statements with this report ; but all, with the exception of Kandla and Jansuth, are in hand, and seven pergunnahs can have their new jummas fixed in time to date from the beginning of the new agricultural year, or 1st July, 1862,—being completed, at latest, before the collection of the November and December kists.

Of these, the most advanced are the following:—In Thannah Bhowun, Mr. Colvin's proposed jummas are nearly ready ; the total result for this pergunnah is roughly shown in the margin, being a decrease of Rs. 2,684, chiefly caused by the introduction of the half-asset principle.

The same officer has inspected the whole of Jhinjana, and will be ready to give out the jummas of the estates very shortly.

Churthawul is not so far forward, but the jummas will be ready by July, as will also those of Mozuffernugger and Bugra,—the papers, with notes by myself and others in the English books, having been made over to Mr. Grant on his joining (1st March). But I would wish the question to be carefully weighed, whether the two Pergunnahs of Bugra and Churthawul are not in too depressed a condition to justify the hope of a satisfactory settlement for a long period being at present effected. The emigration has exceeded 10,600 souls, as shown in the margin, and, though this

	POPULATION.	
	1265 Fuslee.	1268 Fuslee.
Bugra ...	40,733	37,046
Churthawul ...	84,542	27,797

is not an emigration of the agriculturists alone, yet it is so for the most part, there being nearly as many agriculturists as non-agriculturists in the pergunnahs referred to, and the emigrants having been often known to have gone in search of agricultural employment in more favored localities. At this moment, the traveller, in passing through the tract of country referred to, cannot fail to be struck with the wide-spread desolation of the villages, and the desert aspect of what once were fields. When it is borne in mind that this is perhaps the very most fertile tract in the district, and that its resources are likely to be eventually secured by the Deobun branch of the Ganges Canal, it will be seen how important is the question I have raised. For my own part, my humble opinion is in favor of limiting the period of the present settlement in Bugra and Churthawul to a period of five years; and I think it possible that a careful purtal of my shujras and khusras at that time would provide for the due representation of the changes that might meanwhile occur in the area of cultivation.

The Pergunnah of Poor Chupar has been inspected by the Uncovenanted Deputy Collector, Rao Nanuk Chund, whose estimates of jumma are ready for scrutiny and confirmation. That of Bhokurheyree is not quite so forward, but the pre-assessment records are completed.

In Kyrana and Bhooma the survey is nearly finished, and in Shamlee and Khutaolee it is well started.

Thus progress has been made, with which it is hoped the Board and Government will be pleased. Five pergunnahs are assessed, and the record of rights is on foot. Three more are on the verge of completion; and of the remainder—less than half the district—there are but two pergunnahs in which considerable advance has not been made, and even in those two the boundaries have been fixed, and all is in readiness for the commencement of the survey in October next. More progress might perhaps have been made even than this, but for an unfortunate misunderstanding about the estimate, which, having now been cleared up, does not seem to call for further reference. And what has been done has been done at a time when, with failing strength and impaired eyesight, I was bearing the additional burthen of the Income Tax, and could never have been accomplished but for the intelligent and generous aid of my subordinates and the support of yourself and the Board, all which I desire gratefully to acknowledge. Of Mr. Colvin's merits I have often spoken before; the value of his aid and that of Deputy Collector Nanuk Chund will also be seen from these pages. The Covenanted Deputy Collector, Mr. W. Lane, has been uniformly obliging in testing measurements and recording information.

Thus far the result of the new proposals of assessment has been such as to cause a decrease of net revenue* amounting to about Rs. 20,768-8-3.

General Observations.

But it is to be borne in mind that, of these four pergunnahs, two

* Pergunnah.	Present.			Proposed.
	Rs. A. P.			Rs.
Boorhana ...	75,010	3	6	70,261
Shikarpore ...	1,06,109	1	0	1,03,261
Gordhunpore ...	19,503	0	0	19,748
Bedolee ...	42,254	3	9	28,838
Total ...	2,42,876	8	3	2,22,108

were in a depressed state,—Bedolee and Boorhana,—and all were dependent on the vicissitudes of season. In regard to such tracts the observations of His Honor the Lieutenant-Governor of these Provinces have a special weight. "In many of the districts, it is likely that the application of

the liberal rule of settlement at half assets will, to some considerable extent, affect the revenue."* It will remain for my successor to see whether the increased capabilities of estates which have come under the influence of canal irrigation since

* *Vide* General Report on Administration, 1859-60, Section V., paragraph 104.

the last settlement will not at least fill up the gap caused (I submit inevitably) by my proceedings. From a statement with which I have been favored by Major Brownlow, I find that the irrigation has much more than doubled since last

Average for the years 1839-40 and 1840-41.	Average for 1850-51 and 1851-52.	Average for 1858-59 and 1859-60.
Acres.	Acres.	Acres.
22,205	37,615	58,615

settlement on the Eastern Jumna Canal. But it is on the eastern side of the district that the greatest contrast will be found to exist between the past and present. The Pergunnahs of Poor, Bhokurheyree, Mozuffernugger, Jansuth, and Khatoulee are now nearly covered by a net-work of rajbuhas, the oldest of which has not been

running more than six years, and of which the result will be to increase enormously both the stability and the amount of the Malgoozar's resources. In the Appendix to Mr. Thornton's Report (No. 3) will be found a statement in which is given the result of his own personal appraisement of the three chief spring crops. I have obtained

	Wheat.	Barley.	Gram.
Mr. Thornton ...	8 39	7 7½	6 11 0
Major Brownlow ...	12 0	20 0	15 0 0

from Major Brownlow an appraisement of crops produced on lands irrigated by his canal, from which I extract the corresponding entries.

In a demi-official communication called for by the Senior Member of the Board last year I went at some length into this question; and the result of all the experience I have since gained is to confirm me in the opinion that the rates on lands watered

† In regard to some of the effects of the Ganges Canal in this district, see Sir P. Cautley's printed Report, Vol. I., p. 450.

by canal may be safely pitched at double what it would be—other things being equal—on land watered from wells.†

But the question then arises, how is it to be expected that the Malgoozar will overlook the very obvious prospect of advantage held out to him by the option he has of not availing himself of canal water till the assessment for thirty years is concluded? An assessment, moreover, which there is some possibility will be made permanent. I know of estates at this moment where the Malgoozars will neither take water during the current season, nor allow their tenantry to do so; because they know that the settlement survey is coming on their way, and they hope that their land will be entered as "baranee," or dependent on rain, whereas it is commanded by a rajbuha running on a high level, which will pour its fertilizing waters over the whole area as soon as the jumma is fixed. I submit that the Settlement Officer's duty in such a case is clear. After verifying, by communication with the department, the extent capable of irrigation, he should assess it precisely as if it were all entered in his records as "irrigated," for his jumma is to be fixed with regard to the expected capacity of estate "during the period of settlement"—*vide* Directions to Settlement Officers, paragraph 53. Whether the proprietor may pay the canal dues, or whether they are paid by the cultivator again, does not appear to affect the question of the value of the assets, any more than the question whether water is or is not taken at all. It is true that, on the supposition that the rent is paid in kind, the practice of holding the tenant responsible for the water dues, while the landlord receives his share of an enhanced crop in whose

enhancement he has had no share, is alike opposed to abstract justice, and to the spirit of the Rent Laws.* It is equally true that the asamees may well be in doubt whether the letter of the law is sufficiently clear

* Act X. of 1859, Section 17.

to justify them in resorting to it for redress; and the result of their doubts may be a further check on the development of irrigation. The remedy might be provided by a clause in the *wajib-ool-urz*, by which it should be provided that the cultivator and the Zemindar should be jointly and rateably responsible to the Canal Department for the water dues. But the best plan, in my opinion, would undoubtedly be the following :—

I would get the Superintendents of Canal Divisions to take a wash of blue over that part of the *shujra** of each estate which represents the *minimum* of constant irrigation, and which should be assessed as such once for all. I would then direct the putwaree to note in the *jummabundee* of each year, opposite each of the remaining fields, if it had been irrigated during the year. The extra irrigation thus shown would be a varying quantity, and would be liable, after having been tested here, or in the Canal Department, to enhanced rates, both of rent and revenue, according to the terms of the settlement. The enhanced revenue would all be paid to the Collector; the increase on the settlement demand caused by canal irrigation being shown to the credit of the Canal Officer, while the enhanced rent would go to the *Malgoozar*. Thus if an *asamee* held an acre of land on which he grew sugar at Rs. 18 per acre, and two acres on which he grew crops of which he gave a moiety valued at Rs. 5 in an ordinary year, the revenue would be Rs. 11-8, and the rent Rs. 23. But if he took canal water in any particular season, both of these rates would be increased, according to the settlement rule, by Rs. 50, Rs. 75, or Rs. 100† per cent., as might have been previously determined. These difficulties are chiefly felt in estates held by non-cultivating individuals. The proprietary bodies are distributed through the district according to the marginal table, showing the tribe of first and second preponderance in each *pergunnah* in which the rights are chiefly held by

Tribes.		
Pergunnah.	Chief Tribe.	Second Tribe.
Bedowlee, ...	Goojur, ...	Jât.
Kyranah, ...	Goojur, ...	Puthan.
Jhinjani, ...	Jât, ...	Miscellaneous.
Thaunah Bhowun, ...	Rajpoot, ...	Miscellaneous.
Shamlee, ...	Jât, ...	Rangur.
Kandla, ...	Jât, ...	Goojur.
Churthawal, ...	Tugga, ...	Rajpoot.
Bugra, ...	Jât, ...	Miscellaneous.
Shoron, ...	Tugga and Jat, ...	Puthan.
Boorhana, ...	Jât, ...	Rangur and Puthan.
Gordhunpore, ...	Goojur, all but uni	versal.
Bhokurheyree, ...	Jât, ...	Sheikh and Goojur.

cultivating communities. In the remaining *pergunnahs* *zemindaree* tenures are frequent, and are held either by *Syuds* of ancient family, or by capitalists for whom they have made room under the combined action of their own mismanagement and an efficient system of Civil Justice.

Of the proprietary bodies, who hold the greater part of the land in their own cultivation, the *Jâts* are by far the best. The same habits which raised this tribe to sovereign power in the Punjab and in Bhurtpore, are shown here in the more peaceful conquests of rural prosperity. Their villages are neat and clean; every *zemindar's* house plastered, and has an ample doorway, more or less ornamented with carved wood; their *pucka* wells are in repair, and wherever they can, they are apt, to sink temporary wells with carefully made wooden framings, which last many years. This class I would always assess according to their assets; nor will they be found to complain, so long as a special addition be not made, as native officials will always advocate, for which no other ground can be shown but that they are *Jâts*.

At the opposite pole will usually be found the *Goojurs*, a wild, untidy, thriftless class, unfit for the exercise of proprietary functions. The character of the western *Goojurs* has been well given in Mr. Colvin's Report on *Pergunnah Bedowlee*; those to

Shara'mand
again see
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the castward are of the gentler race (Got), and are favorably influenced by their prosperous brethren of Landhoura; their chief faults are want of energy and of skill. The Rangurs again, and other lower classes of Mussulmans, are usually remarkable for a complete distaste for agricultural operations; and where they prosper, it may be said to be in spite of themselves. In my remarks on Shoron, I observed that such habits constituted, in my opinion, no claim to special indulgence. On the contrary, it will sometimes be found that land held by persons who never give it manure is so far benefitted that it has not exhausted its powers with the more expensive crops. A fair jumma cannot, it is true, be paid by the present owners; but it does not necessarily follow that they will lose their rights. The baser sort may, and I shall not consider it an objection to my principles of work if they do; for I think Rangurs and Goojurs are more in their place as tenants and servants than as Government Malgoozars. But the Puthans, and, indeed, some of the others, will let out the greater part of their land in farms of greater or less extent; and thus a provision will be obtained for the redundant population of neighbouring estates, many of whom (especially the Jâts) are prone to overflow wherever they can find land.

There is a class of tenures, however, on which it may be necessary to obtain definite instructions. I refer to what is called the *Shurh nugdee*,—the meaning of which is that a certain fixed rate is laid down in the khuteonee, and as long as this is paid, the Malgoozar is only entitled to a deduction, in the way of malikana, usually of 18 per cent. This closely resembles a Talookdaree tenure as described in the 99th paragraph of the Directions to Settlement Officers; but it does not satisfy the so-called proprietors, who see the estate advancing in prosperity, while of that prosperity they enjoy no share. I have not dealt with any of the pergunnahs in which this custom exists, but I question the propriety of maintaining it. The provisions of Act X. of 1859, Sections 13, 14, and 17, appear applicable to cases of the kind, unless we allow them to be barred by a renewal of the old settlement agreement; and to this the proprietors would, I believe, almost universally demur. A list of the 35 estates, or parts of estates, to which the above remarks apply will be found appended. The Malgoozar has the right of charging 5 per cent. additional in the event of any cultivator withholding the prescribed payment; but I suggest that they should be left in all respects free to make any arrangement that may not be incompatible with law for the future. The arrangement may have suited all parties at the former settlement, but it is a bad one in itself, and I think it has been in some measure the cause of the distress which has been felt during the late droughts; it certainly has an obvious tendency to retard improvement, the cultivators seldom being in a position to lay out capital, and the so-called proprietors having no interest to induce them so to do.

List of Estates in Zillah Mozuffernugger in which the cultivators hold at fixed rates, and the proprietors are only entitled to a percentage on the demand.

PERGUNNAH CHURTHAWUL.

Mouzah Kuteysra, Dudheyroo Khoord, Akhlore, Kucholee.

PERGUNNAH MOZUFFERNUGGER.

Mouzah Mukheesalee, Molaheyree, Lucheyra, half of Pucheynda Khoord, Meghakheyree, and Chandpore.

PERGUNNAH BUGRA.

Mouzah Dhunsaeenee, Kanonee.

PERGUNNAH BHOKURHEYREE.

Sikundurpore, Belra, Nulheyra, Rahmutpore, Nirganjee, Dareepore, Kureyra, part of Uthaeen, and Dheeraheyree.

PERGUNNAH POOR CHUPAR.

Kudhereea, Shakurpore, Raepore, Jojleh, Bhaeensurheyree.

PERGUNNAH KHATOWLEE.

Mutheyree, Negaeen, Surdhun, Kheyree Tuggan, Doodaheyree, Lahora, half Mokpore, Bhaeensee, Murh, Sutheyree.

I have thus reported all that has been done up to date, and trust that I have not trespassed too long upon your attention.

I have, &c.,

Mozuffernugger :
The 15th March, 1862. }

H. G. KEENE,
Collector.

PERGUNNAH KANDLA.

THIS pergunnah was inspected in the cold weather of 1862, and assessed during the rains of 1863.

2. The pergunnah on the whole is not inferior to any in this part of the district, except, perhaps, Shamlee. The villages to the east of the Hindun lie rather high, but the soil is naturally

Description of pergunnah. fertile. To the west, the villages between the Hindun and the canal are, next to the Kodanah Circle of Pergunnah Shamlee, the most fertile I have seen; while to the extreme west, the land, though inferior to the rest of the pergunnah, is on a level with the average of the neighbourhood. The cane in the best group of villages pays as high as Rs. 18 per acre, and the cotton Rs. 7-8-0. The only higher rent-rates I know in this part are in the Kodanah Circle; where the sugar pays Rs. 19 per acre, and the cotton Rs. 10-5-0. But that circle is the best on this side the Kalee Nuddee. A road runs from Boorhana to Kandla and on to Kyranah, and another from Shamlee to Kyranah and on by Ailum to Baghput. This is the chief road in the pergunnah; grain, salt, and cane passing up it from and to the Saharunpore District. Kandla itself is not a trading town, but inhabited chiefly by a well-bred family of Sheikhs, and another of Moguls, both formerly maâfeedars. There are, too, a good many Goojurs. Wheat is the chief crop grown, but tobacco has been lately taken up, and is found very profitable. The chief caste in the Trans-Hindun villages are Goojurs; wonderfully transformed by the canal, and in some degree respectable themselves, though not the cause of respectability in others. They find agriculture more profitable than thieving, but they harbour Kahars and others who live by roguery, and are always ready to pass on a stolen buffalo, or foil the enquiries of a Police Officer. Among them are sprinkled a few Jâts. The Cis-Hindun villages are occupied by Jâts and Rajpoots. The chief form of village, as usual, is Bhyachara, though, as will be presently mentioned, there are enough zemindaree villages to suggest a not unuseful comparison. The canal irrigation in 1840 had been 15,060, as against 30 villages, and at settlement was by canal papers 30,575, as against 39 villages.

3. In Kandla, as in Kyranah, I could find in none of the settlement reports any mention of the assessment of the pergunnah as a whole. Detached villages were mentioned by Mr.

Circles and rates. Plowden and Sir H. Elliot, but rates and circles were not forthcoming. I believe the Trans-Hindun villages were settled by Sir H. Elliot, and the Cis-Hindun by Mr. Plowden. I made two fresh circles,—the Kandla and Purasowlee,—as marked in the map, and distributed the other villages amongst the Shamlee, Kyranah, Bangur, and Kodanah Circles. In the new circles I made new rates on the principles detailed in the Thanna Bhowun Report; and for the same circles I used also a set of summary rates used by Mr. Plowden in assessing similar and neighbouring pergunnahs, and to be found in pp. 238, 239, Vol. I., printed Settlement Reports. These I reduced to half assets.

The rates of the new circles then stood as follows :—

	<i>Meesun</i> <i>irrigated.</i>			<i>Meesun</i> <i>unirrigated.</i>			<i>Roslee</i> <i>irrigated.</i>			<i>Roslee</i> <i>unirrigated.</i>			<i>Dakur</i> <i>irrigated.</i>			<i>Dakur</i> <i>unirrigated.</i>			<i>Bhoor</i> <i>irrigated.</i>			<i>Bhoor</i> <i>unirrigated.</i>		
	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.
Kandla ...	4	4	0	3	3	0	3	6	0	2	9	0	3	0	0	2	0	0	1	15	9	0	15	5½
Purasowlee...	3	6	0	2	15	0	2	7	0	1	13	0	1	12	0	1	4	0	0	12	0	0	10	0
	<i>Irrigated.</i>												<i>Unirrigated.</i>											
	Rs. As. P.												Rs. As. P.											
Cis-Kirsunnee ...	...												2 8 4											
Trans-Kirsunnee ...	...												3 9 9											

4. These were applied, and the assessments made on the same rules as I observed elsewhere. The Cis-Kirsunnee villages were very unequally assessed, and the Trans-Kirsunnee mostly very much under-assessed. In the kusbeh, Sir H. Elliot, ever light on ex-maâfeedars, and especially on Mahomedan ex-maâfeedars, had left quite two-thirds of the assets in their hands. Some other villages, for causes I could not ascertain, had been under-assessed. Much as I raised the demand, I still left more than half the assets in the hands of the ex-maâfeedars, and they accepted the demand without hesitation. Though the demand on the mehal of Sheikhs was doubled, the rate only now falls at Rs. 1-12-0 per acre, while in similar villages lying around it rises to Rs. 3-4-0 and Rs. 3-5-0. But these lands were the only means of livelihood of a respectable body of gentlemen; and, remembering the station they occupied, the expenses their position obliged them to incur, their social influence, and the useful character of their occupation (which is chiefly literary), I avowedly left them more than at half assets they could have strictly claimed.

Former and proposed demand.	5. The former demand was ...	=Rs. 1,00,759
	At deduced revenue rates, ...	= ,, 1,27,937
	Proposed demand ...	= ,, 1,11,068

The difference between 2 and 3 is chiefly due to apprehensions of the result of a too sudden rise.

Rates of new settlement in circles and castes.

6. The rates in each circle, and on each caste in each circle, of the new jumma are as follows :—

		<i>Malgoozaree rate.</i>			<i>Cultivated Rate.</i>		
		Rs.	As.	P.	Rs.	As.	P.
Circle Kandla	...	2	6	9	2	10	3½
Ditto Shamlee	...	2	6	0½	2	8	11
Ditto Kyrana Bangur ...	...	1	5	9	1	9	0½
Ditto Purasowlee	...	1	7	10½	1	11	7
Ditto Kodanah	...	2	8	11½	2	13	3½
Pergunnah	...	1	15	9	2	3	5
<i>Circle Kandla.</i>				<i>Circle Shamlee.</i>			
	Rs. As. P.	Rs. As. P.		Rs. As. P.	Rs. As. P.		
(14 villages) Jâts ...	2 12 5½	2 15 11½	(1 village) Jâts ...	2 0 7	2 8 0½		
(3 „) Goojurs, 1	7 5½	1 12 6½	(10 „) Goojurs, 2	6 8	2 8 11½		
<i>Circle Kyrana Bangur.</i>				<i>Circle Purasowlee.</i>		<i>Circle Kodanah.</i>	
(1 village) Sanees, 1	5 7½	1 6 10½	(6 villages) Rajpoots, 1	7 4½	1 10 4	<i>All Jâts.</i>	
(1 „) Jâts, 1	5 10	1 6 7	(5 „) Jâts, 1	12 10	2 0 5½		
(12 „) Goojurs, 1	4 11½	1 10 0	(2 „) Kurobs, 0	12 1	0 15 2		

7. There were Lumberdars at settlement, who have been reduced to , and Putwarees, who have been reduced to. The highest pay is , and the lowest

8. I had hoped before leaving the district to see the results of the various statements for this pergunnah; but, with the exception of the Transfer Statement, none have been yet completed. From that the small amount of transfers, and the high price at which they have been effected, will be seen, giving an index to the prosperity of the pergunnah. On the whole, it has been the most highly prosperous I have seen.

9. This pergunnah is interesting as giving in one view a good specimen of estates under the various kinds of management. Mahajun land-holders and village communities are here side by side; and setting apart, as far as they can be detected, disturbing causes, a man may judge for himself of their comparative results. I do not know what it is in other districts, but in the pergunnahs of this district which I have assessed the

I.—PERGUNNAH KANDLA.

Village Communities.	Zemindaree Villages.
Ailum (Jāts).	Aldee.
Disala (Goojurs).	Rampoor Kheree.
Pinjokra (Goojurs).	Gungeyroo Sadat.
Bumbeesa (Jāts).	Aaudpoor (Sheikh).
Bural (Rajpoots).	
Lisadh (Jāts).	

II.—PERGUNNAH KYRANAH.

Village Communities.	Zemindaree Villages.
Gogwan, } Bhoorah, } Goojurs. Teeturwarah, }	Kishorepoor (Mahajuns).

III.—PERGUNNAH THANNA BHOWIN.

<i>Village Communities.</i>		<i>Zemindaree Villages.</i>	
Noujul, Rajpoots.		Cazeepoor,	} Mahajuns.
Yarpoor,	} Jāts.	Ahmedpoor,	
Bunkera,		Moolanpoor,	
Bhysanee,		Saneepoor,	
Gagwan,			
	} Rajpoots.		

IV.—PERGUNNAH CHURTHAWUL.

Zemindaree Villages.
Bannugur, } Loharee, } Mahajuns. Jut Nugla, } Deedaherece, }

balance is altogether in favor of the village communities. I add in the margin some of the villages from which I have drawn this conclusion. These are villages in which there are, as far as I could see, no disturbing influences. The village communities are of all castes, and both they and the zemindaree villages are those which in the former settlement were fairly assessed. In some no increase has been made in the demand; in many others a reduction has been allowed; in a few it has been raised: hence these villages are fair subjects of comparison. Thus, in Ailum, Bural, Gogwan, Nowjul, Bhysanee, Gungeyroo, and Loharee, a reduction has been allowed. In Lisadh the demand has been retained; in the others it has been more or less raised. The zemindaree villages are, it should be added, all, those in which the Zemindar, whether mahajun or other, has got a thorough footing. Every village, in fact, except those in which, though the landlord has rights, he has never been in full enjoyment of them.

10. In the village communities the villages are full and substantial. Cultivation is incessant, careful, and of the best crops. The land-holders are for the most part intelligent, pleasant men, out-spoken, Description of bhyachara and self-reliant, and independent. Their cattle are numerous, and well-to-do. Artizans of all kinds are to be found in every village, and the general impression is of comfort and abundance. But in villages owned by landlords of other castes—i. e., in zemindaree villages—all this disappears. The site is covered by a few huts of malees or chumars. The cultivation is in greater proportion of poorer crops. There is less manure, and hence less cane, cotton, or maize. The cultivators are miserably poor and ignorant, without self-reliance, or interest, or intelligence. All the material with which education has to deal is wanting; all the qualities which form the basis of rational prosperity are discouraged or destroyed.

11. Where cultivators with right of occupancy have contrived to hold on (this is generally in other than mahajun villages), the villages in which cultivators have a right of occupancy. characteristics of the village are the same as in village communities;—there are the same substantial houses, the same abundance of cattle, the same air of independence and self-reliance amongst the residents.



12. Nor is this distinction accidental. The method in which the original landholders are first reduced to cultivators, and finally driven away, is matter of daily experience. At different times I have had opportunities of seeing it in its different stages. If the landlord have not bought the cultivating right, he first gets the Putwaree on his side. He then commences a career of suits for arrears of rent, refusing to divide the grain when ripe, and preferring to embarrass the cultivators by subsequent litigation. The cultivators, on their side, are nothing loth, and enter on the contest in the hope of dispossessing the proprietor, or worrying him out of his estate. The former party never, the latter only under the prospect of ruin, wishes for compromise. Decrees and balances accrue; the cultivators are unable to meet the accumulated demands; at last a suit for ouster is brought, and the cultivators lose their right of occupancy. From that moment the fight is over. The landlord lets out his fields to men from other villages; the old cultivators disperse; the site is abandoned; the houses fall in, the high-walled enclosures are levelled, and in a corner of the village a space is cleared for the low huts of malees or the yards of chumars.

13. The principal reason leading to the adoption of such a line of action I believe to be that the mahajun landlord does not see in what his real interest consists. He looks for increased profits from an increased share in the produce of the land, not from an increase in the produce itself; hence he seeks to cultivate it with men who will not haggle about their share. The independent qualities of Jâts and Rajpoots are odious to him. The qualities that distinguish them are precisely those which he most dislikes. First-rate agriculture, unceasing labor, and an intelligent tenantry, are not his object. He prefers indifferent tillage and submissive hands. And what in this district is done on a small scale would, if occasion offered, be re-produced on a much larger. Population is abundant, and agriculture is the chief resource. Hence, in as far as the village communities or cultivators with right of occupancy were destroyed, so far would the population depend for its subsistence on the terms which the mahajuns chose to impose.

14. But if the germs of social progress lie in the independence, the leisure, and the comfort of the mass, and to such independence, leisure, or comfort, the tenure of the mahajun is fatal, does not a system in an agricultural society, in proportion as it extends mahajun tenures and destroys the village communities, or the occupant tenants, militate against the condition of social advancement?

15. Indeed, it is difficult to see what benefit can at present be expected from large native land-holders in this part of India. They do not understand the duties of landlords. They have no enterprize, or wish to improve the country and forward its social prosperity, and they would be the very last to interest themselves about the education or progress of the masses. All experience, I believe, proves, even if all *a priori* reasoning had failed to point out, that as a rule among an agricultural people great landlords and a flourishing community are incompatible; and most assuredly of all great landlords the least likely to belie experience would be the Soukars of this district. A few large estates are in every way desirable, but what seems so objectionable is the tendency to have nothing but large estates.

16. In speaking of the prosperity and intelligence of these village communities, I am aware that I may be charged with exaggeration; but it must be remembered that I speak of villages fairly situated. Villages really over-assessed (in Mozuffernugger they are few) are a miserable sight enough. Villages with a poor soil or scanty irrigation are often ill at ease. Nor do I allude to Sheikh,

Pathan, or Syud village communities. These have the form, but not the spirit. The characteristics of the Hindoo or more industrious Mussulman village communities are altogether wanting in them, though even of these it may be said that in their hands cultivation is not worse than in mahajun hands, or their presence a source of greater social depression than the presence of a handful of malees. It may, too, be denied that the village land-holders are the men of substance I have described; but I have reason for supposing that some of those who differ (men of little experience, but of quick observation) have confounded the chumars, sweepers, weavers, and kahars, who are always to be seen hanging about the pools and the bye-lanes of a village, with the actual proprietary body. The error is not unnatural, or the inference unusually hasty; but it is the source of much erroneous declamation, and very considerable misconception of the agricultural *physique*. Meanwhile, I have cited the villages from which, amongst many others, I have generalized, and any one who likes may see them and judge for himself.

17. No doubt, too, that many natives (chiefly Mussulman) whom our rule has impoverished, and who lived by the plunder of these
 Prejudice against them. very villages, hate them for their prosperity, and, contrasting their own fallen state with the spreading villages and comfortable homes of their once defenceless subjects, are never weary of enlarging on their ignorance, stupidity, insolence, and rascality. And as these men are chiefly of the class who fill the ranks of the Government service, they contrive to inoculate with their own ideas a good many official and non-official Englishmen. But the sources of native opinion should be searched, though the decaying Mussulman may be excused for flinging a last lie at the class whose prosperity depended on his destruction.

18. How far the present form of community may be suited to a more advanced
 Present form of village—how far state of society is another question; but I should
 susceptible of change. think that the necessary changes will be brought about without the aid of legislation. The tendency in this district is to leave no land in common, every man holding in separate possession his cultivated, barren, and inhabited land. The joint responsibility remains unimpaired, but every man gets the
 Changes now visible. entire fruit of his own labor; hence suits for im-
 perfect partition have been very numerous. Outsiders are doubtless still deterred from letting their money go to the land, but, as has been said, in the present state of society here, there is a wide difference between an outsider purchasing land, and expending his money upon the land.

19. A permanent settlement may do well, but any one who travels through this
 Remarks on a permanent settlement. district, and listens to the tales of its condition forty
 years ago, will confess that temporary settlements have done well too. The map shows how closely the villages lie together, and the census shows a population of 409 to the square mile. But neither map nor census can give an accurate idea of the teaming life, the innumerable wheat fields, the long stretches of cane cultivation, the busy wells, the variety of large tracts of uncultivated land, the prosperous stir of villages and agricultural towns. The people say that, under a permanent settlement, if Government takes no increase, neither will it give any relief. They think, too, that when it ceases to be directly interested in the land, it will be averse to expending money on works for improvement of agriculture. Experience, they say, has taught them that the Government has been true to its word when it said they should be left alone for thirty years. They see that at the expiry of that term no greedy hand has been laid on their villages, and that Government did not hold off merely to grasp at the end. They acquiesce in, and understand the re-adjustment of, the demand; and hence they scarcely know whether to be more pleased at the advantages or frightened at the dangers of a permanent settlement.

MOZUFFERNUGGER : }
 The 8th January, 1864. }

A. COLVIN,
 Settlement Assistant.

PERGUNNAH SHAMLEE.

1. This Pergunnah was assessed in the hot weather of 1863, and the new jumma came into force from 1271.

2. The Pergunnah has Thannah Bhowun on its north, Bugrah to the east, Kandlah to the south, and Kyranah to the west.

Description of Pergunnah.

The Kirsunnee runs through it from north to south-west between high banks. The Pergunnah is very unequal in fertility. The villages grouped about the canal are naturally fertile, though the soil is adapted in each set for different crops. In the west corner a small plot of villages takes after the high character of the neighbouring Kyranah Bangur Circle. The villages to the east of Kirsunnee again are widely different. Those which I have grouped in the Buntée Khera Circle have a poor soil and scanty irrigation; while the villages on the extreme east, the Kodanah Circle, are among the most naturally fertile in the district. There is some low land near Sulawur and Kurorce injured by the interception of drainage caused by the canal, but Major Brownlow has run a drain, as marked in the map, from Salawur to Sikkuh, and hopes to carry off the water into a natural nulla running into the Kirsunnee. The inhabitants are chiefly Jâts, and the villages Bhyachara. Shamlee is the only large town. The chief trade of Shamlee is in sugar, but every kind of produce is imported and exported. In cloth, grain, and salt a large business is done. The residents are entirely mercantile, and give a good specimen of the narrow, stupid, grasping character of too many Hindoo merchants. Their trade within the last two or three years has slackened, and the reason given is that the Shamlee merchants are not true to their agreements, and houses at a distance refuse to trade with them. To Government Officers they are invariably disobliging and inattentive. Major Brownlow by drainage has made their town comparatively clean and healthy; and what he has done for their bodies, some future officer of equal energy may possibly do for their morals. They have no man of any substance amongst them—only small traders. The chief roads are from Shamlee to Mozuffernugger crossing the Hindun at Tutavoe where a bridge is now building. This road is much used,—sugar and rice coming up, and grain going down it. From Thannah Bhowun another road runs to Shamlee, and from Shamlee three more branch out to Jhinjhana, Kyranah, and Kandla. Perhaps there is more traffic on the Shamlee-Kyranah Road than on all the others. The sugar of Shamlee leaves by this road for Paniput and other districts of the Punjab, and salt comes up this road to Shamlee. The Eastern Jumna Canal runs to the west of Shamlee. At Shamlee is a Tehseel and Police Station.

3. The average canal irrigation, by canal papers at the last settlement, was
 Canal irrigation of former and present settlement. 10,086 acres as against 20 villages, and at re-settlement, 15,615 acres as against 24 villages.

4. For purposes of assessment I found three circles existing—the Shamlee, Bhynswal, and Kodanah, and to these I added a fourth, the Buntée Khera. The accompanying map shows the villages included in each circle; the rates for the Shamlee circle were retained with some slight alterations. I considered the rates on irrigated and unirrigated Roslee too low, and raised them respectively on a calculation of the average out-turn of the various crops in each from 2-5-5½ to 3-0-0, and from 1-10½ to 2-1-2. In the Kodanah Circle I altered the rates for the same kinds of soil from 2-12-8½ to 3-3-3, and from 1-11-9½ to 2-6-0. The other rates were retained without reduction to half assets. The Bhynswal and Buntée Khera rates were altogether recast. Those framed for the Bhynswal Circle seemed to me, and to various zemindars whom I consulted, high where they should be low, and low where they should be high. Thus, rice is the great staple of that Circle, and wheat is rather inferior; but the rates for the soil on which either is grown were equal. Sugarcane and cotton, too, are fair, but not extraordinary, the land having suffered from over-cropping. The rate for that land was Rs. 5 an acre, which I could not on any calculation retain. Accordingly, I framed fresh estimates on

the principles detailed in the Thannah Bhowun Report, and made them the basis of my rates. These rates I proposed to various zemindars not connected with the circle under assessment, and, after such modifications as seemed reasonable, I retained them. The rates of all the circles will be found at the foot of this Report: the estimates rest on personal enquiry. Among Bhyachara villages Khusrah Kunkoot do not exist; and suits for rent are rare, and otherwise do not help one in estimates as to kinds of soil. In the Bhytnswal and Shamlee Circles, too, in the place of the estimates in the Appraisement Tables, I substituted for certain articles an estimate, as in the mar-

BHYNSWAL.		
	Mds.	Srs.
Wheat	... 8	0
Gram	... 9	24
Barley	... 14	16
Dhan	... 24	0
SHAMLEE.		
	Mds.	Srs.
Wheat	... 10	0
Gram	... 8	0
Barley	... 9	0
Dhan	... 11	0

gin, and made my calculations on it in lieu of those averages given by Mr. Thornton. The results in each village will be found in the miscellaneous remarks, and answer invariably to the result of the deduced Revenue rates. Every village was visited, and I may boast a very intimate knowledge of this as of other pergunnahs in this part of the district.

In this pergunnah I first adopted a plan formerly pursued by Mr. Thornton, but which, through a want of experience and due appreciation of the nicer points of assess-

Distinction between irrigated, unirrigated, and irrigated in other years.

ment, I had hitherto only partially carried out. Distinction was in Shamlee first made between land actually irrigated in the year of measurement,—land not irrigated that year, but capable of, and in other years receiving, irrigation,—and *bonâ fide* unirrigated land. The second and first kinds had hitherto been classed together, and an offset made against the average assumed to fall into the second class. Now, however, they were carefully distinguished. Irrigated rates were applied only to the area actually irrigated in the measurement year, and the two other classes were assessed at the unirrigated rates. The object in assessment being to ascertain the out-turn of one year, irrigated rates applied to land unirrigated, the year of measurement would have assumed a greater average of better crops and of the better kinds of crop than actually was the case. Where this second class (moheeta) was larger than could be fairly accounted for, and above the circle average, I summarily included a part of each kind in the irrigated area. Similarly, and on the same principle, manured land was divided into land manured

Distinction with regard to manured land.

the year of measurement, and manured previous years, or for next year's crop. On the first only were manured rates laid, the rest being classed as Roslee. These distinctions were valuable for assessment; and while subjecting to irrigation rates only, the irrigated area show for statistical purposes the whole area capable of irrigation. This plan was pursued in Pergunnahs Shamlee, Kandla, and Kyranah, and will explain the entries of Moheeta, Meesun, and Moheeta Irrigation in the No. II. Statements. For the rest the principles detailed in the Thannah Bhowun Report were followed.

5. The old demand was	...	...	Rs. 1,20,316
Former demand, demand at deduced Revenue rates, and proposed demand.	The deduced Revenue rates	..	1,20,303
	Proposed demand	...	1,20,117

All my jummas were promptly taken up except Tutolee, which I referred to arbitration and slightly lowered accordingly, and Babree, in which a considerable increase had on good grounds been made, but was distasteful to the Mahajun landlord. The rates of the demand in each circle are as follows :—

		Mal. Rate.	Cul. Rate.
	Circle Shamlee	Rs. 2 5 6	2 10 8
Rates of the new settlement on each circle and caste.	„ Bhytnswal	„ 2 6 6½	2 13 2½
	„ Bunttee Khera,	„ 1 14 2½	2 2 11½
	„ Kodanah	„ 2 6 9½	2 13 2
	Pergunnah	„ 2 4 6½	2 10 3½

The rates for each caste in each circle are as follows :—

<i>Circle Shamlee.</i>	<i>Mal. Rate.</i>	<i>Cul. Rate.</i>
(Two villages) Goojurs ...	2 0 2	2 0 11
(Twenty-two do.) Jâts ...	2 5 8½	2 11 1
<i>Circle Koodanah.</i>		
(One village) Sheikhs ...	2 8 8	3 0 0
(Twenty do.) Jâts ...	2 6 9½	2 13 1½
<i>Circle Buntée Khera.</i>		
(One village) Pathans ...	1 15 9	2 3 9½
(Three do.) Rajpoots ...	1 9 11	1 15 9
(Seventeen do.) Jâts ...	2 0 0½	2 4 5½

Circle Bhynswal.

All Jâts.

6. At the last settlement there were Lumberdars, and Putwarees' Circles. There are now Lumberdars and Putwarees' Circles.

7. The amount attributable to the Eastern Jumna Canal is Rs. as calculated in the accompanying statement. And in this place I may bear tribute to the admirable management of the Eastern Jumna Canal under Eastern Jumna Canal.

Major Brownlow. Even natives, usually a class slow to admit the excellency of our arrangements, speak of it, as in fact it seems to be, nearly faultless; and, indeed, any one who knows Major Brownlow will understand the secret of his success with that canal. He has shown what an enormous benefit a canal well managed proves to the people, and how well it repays Government. I believe his departure was regretted as honestly and as heartily by the Zemindars in the neighbourhood as it was by all those District Officers who had the rare good fortune to be associated in any way with him in public business.

Excepting the Statement of Transfers, no other has yet been submitted in this pergunnah, hence, in this Report I am unable to touch on their results. From the Transfer Statement it will be seen that transfers amount to about one-fifth of the whole area; and the price on transfers by order of Court to six years' jumma; while in private transfers the price paid averages 11 years' demand. The nikassees in this pergunnah were perhaps more than usually untrustworthy. The following list, taken at random, will show the jummas cheerfully and promptly accepted by certain villages, and the demand which should, at the rate of five years' nikassees, have been imposed upon them :—

		<i>Nikassees.</i>	<i>Demand accepted.</i>
	Kyree ...	Rs. 2,170	3,400
	Kurada ...	„ 1,245	2,000
	Kubrat ...	„ 478	1,100
	Bootrara ...	„ 624	1,000
	Bunhera ...	„ 1,252	2,027
	Simbhalka ...	„ 1,049	1,800
Mischievous effects of the Statement of Mutations in the Putwarees' yearly papers.			

The present system of village registration seems to me to be very imperfect, and to carry in it the seeds of serious mischief. For example, the Putwarees' records are as a rule accepted and acted on as trustworthy, both in suits for rent and in the Civil Courts, and in these two points the Settlement Officer finds their inaccuracy most glaring. The amount of produce grown is invariably entered at haphazard; transfers are not recorded; foreclosures of mortgages are not noticed; possession is not specified; deaths are not registered: there are so many Putwarees, so many points admitting of inaccuracy, such a difficulty at the best of proper supervision, and such temptation and inducement to the Putwarree to be fraudulent or incorrect, that the failure of the system can scarcely be unexpected. But the matter requires serious

attention. I do not mean that all records, or the whole of every record, is inaccurate ; but they are sufficiently so to call for interference. These records are the basis of hundreds of decisions affecting landed property ; and whatever else is unsound or uncertain, the system on which these records are framed should be true and consistent. The Putwaree himself under that system has far too great influence. He draws only from Rs. 80 to Rs. 120 a year ; but there is scarcely a decision regarding his circle containing property to the value of Rs. 30 or 40,000 which is not biased by his *ipse dixit*. Living as he does in or near the circle, perhaps a relation of some of the zemindars, he can scarcely be expected to be disinterested. (In this district the Bhyachara villages generally put up the appointment to competition, and the highest bidder gets it.) The limit of the Putwaree's duties should it seems to me be narrowed, and the most dangerous of them taken from him. The Statement of Mutations (Nuksha Intikalee) is the paper over which I would give him no influence. That paper embraces by far the most important of his duties. I would remove the Register of Transfers altogether from him : it should be kept at the Tehseel ;—and all mortgagees, transferees, and heirs, obliged, under a penalty, to record mortgage, transfer, or succession. Questions of possession would still arise, but they would be as satisfactorily solved by enquiry among the villagers as by the deposition of an interested or ignorant Putwaree. When the settlement papers had been completed, I would leave nothing to the Putwaree but the Rent Roll and the Village Accounts. That is his proper sphere. Even within that he has opportunities enough for mischief ; but this it is difficult to correct. The power over rights may be at any rate removed from him. This matter it is to be hoped will soon be thoroughly discussed, and some change in the present system approved. The details of a scheme such as that above suggested are open to discussion, but I have little doubt but that some such scheme is required, and is practicable. Transfers reported at the Tehseel, after sanction from the Revenue Authorities, might be duly recorded, and a certificate given to the parties, duplicate Registers being kept at the Tehseel and Sudder. Transfers are not of such daily occurrence that any great work would be entailed by this, and suits in the Civil Court, in which transfer could not be authenticated by a copy of the District Register, might be dismissed. The proper remedy no doubt would be so to educate the people as to induce them to take a more intelligent interest in these records, and must come from within and not from without.

MOZUFFERNUGGER :
The 8th January, 1864. }

A. COLVIN.

See paragraph 4.—

		M. I.	M. U.	R. I.	R. U.	D. I.	D. U.	B. I.	B. U.
Shamlee	Circle ...	3 9 6	3 1 9	3 0 0	2 1 2	1 14 11	1 7 1	1 0 3½	0 12 0
Kodanah	" ...	4 5 6½	2 3 5½	3 3 3	2 6 0	2 3 3	1 12 8	1 15 9	0 15 5½
Buntce Kehra	" ...	3 8 0	3 0 0	2 5 6	1 11 0	1 12 0	1 6 0	0 14 0	0 10 0
Bhynswal	" ...	4 2 0	...	2 6 0	1 12 0	3 12 0	2 10 0	1 1 6	0 13 7

Bazaar prices of grain for the last twenty-four years for Kudwah Shamlee, obtained from the Chowdhree of the Bazaar.

	1840-41.		1841-42.		1842-43.		1843-44.		1844-45.		1845-46.		1846-47.		1847-48.		1848-49.		1849-50.		1850-51.		1851-52.		1852-53.		1853-54.		1854-55.		1855-56.		1856-57.		1857-58.		1858-59.		1859-60.		1860-61.		1861-62.		1862-63.		1863-64.			
	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.				
Wheat	22	23	23	29	37	35	30	27	28	32	30	34	1	4	28	33	33	33	33	34	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32		
Barley	32	28	28	1	5	110	1	31	1	120	1	61	120	112	35	123	120	120	115	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	
Gram	24	23	23	31	31	31	35	35	35	28	33	1	37	39	39	7	30	1	2	37	37	32	1	9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Musoor	25	30	30	37	37	29	38	36	36	32	30	1	31	35	35	8	31	33	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	
Mustard	17	14	14	18	25	24	20	19	22	18	21	25	30	21	15	20	26	26	13	24	23	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18		
Pes	27	26	26	33	35	35	38	30	35	1	24	1	1	110	32	1	5	113	113	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112
Muktee	24	35	35	35	37	39	1	131	27	32	33	110	1	5	32	35	1	3	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	
Jowar	21	35	35	31	36	1	1	30	25	1	31	1	1	110	32	35	35	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	
Bajra	21	35	35	30	35	1	38	28	26	37	38	1	1	110	32	35	35	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	
Mote	22	33	35	35	31	30	38	30	29	37	37	35	1	5	36	34	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	
Oorud	19	32	26	26	21	26	30	29	28	35	23	31	30	30	32	32	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34		
Moong	18	32	32	32	21	27	32	28	27	32	25	30	1	1	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32		
Dhan	31	34	5	32	1	111	37	88	34	1	34	1	1	110	32	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	
Chuhora	24	33	1	22	31	35	35	34	34	1	34	1	1	110	32	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	
Kurrur	15	14	18	20	18	16	16	14	18	16	26	15	15	25	19	15	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17		
Torya	20	18	23	27	25	22	22	20	26	20	25	25	25	28	20	20	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	

Runner

If this be a correct return of the price of grain for the last twenty-four years, then certainly grain has become cheaper instead of dearer. This can only be accounted for by the fact of a large increase in the cultivated area, and more grain thrown into the market than could meet with a ready sale. I have mentioned in another place that both my Assistants, Messrs. Colvin and Grant, have enquired into the matter, and they state that fuel or harvest prices are rather cheaper now than they were at the last settlement. Considering the rapid growth of the population, and the demand elsewhere for grain, it is very difficult to understand how fuel prices can possibly remain stationary.

Kurree

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S. N. MARTIN,
Collector.

PERGUNNAH JHINJHANA.

1. THIS Pergunnah lies to the west of Thannah Bhowun and east of Bidowlee, and is bordered by Shamlee on the south, and Gungoh, of the Suharunpore District, on the north. In point of cultivation and natural

Description of the Pergunnah. fertility it varies greatly. The villages in the north-west corner are imperfectly cultivated, and thick with high dhâk jungle; but the soil is naturally fair, and up to the average of the district. In the north is a small clump of high lying estates, with sandy light soil, and water at a great depth. Towards the south the cultivation improves, the villages grow larger, population is more abundant, and dhâk jungle grows infrequent. In the south-east cultivation is very high, and as good as any I have seen in the district; while in the opposite south-west corner there is scarcely a blade of wheat, or an inhabited village. This corner lying under Bidowlee suffered from similar causes. The chief crop, as will be seen from No. Statement, is wheat (47 per cent. of the cultivated area); Chwur occupies 18 per cent., and the other crops are grown in small but equal proportions. The only town is Jhinjhana, situated high above the plain and over-looking to the north-west the ill-cultivated plains that stretch across to Bidowlee, and to the south-east the mango groves, close clustering villages, and wheat fields which mark the neighbourhood of the Eastern Jumna Canal. High as the town lies, it suffered severely from cholera in 1861. The largest village perhaps is Oon,—one of many admirable examples of Jât industry and the vigour of a village community.

2. The chief castes are Jâts and Goojurs: there are also some Pathans, Rors, and Sheikhs. The pergunnah map accompanying will show the distribution of castes. The area* is 94

Castes, area, &c.

* As against 93·2 and 409, page 110, Christain's Report on the Census. Reduction in population attributable to results of Mutiny and drought.

square miles, and the population 306 to the square mile. There are but three Zemindaree villages, all lying in the small ill favored group spoken of in the last paragraph. The bulk of the villages is Bhyachara; there are markets at Jhinjhana and Gurhee Hussunpoor, chiefly for agricultural produce. The Meerut-Kurnal Road runs through the south-west corner and taps the Jhinjhana market, which is also one of the markets for the Bidowlee Pergunnah. This road is at present the only high road in the pergunnah; but a new road, the line of which is traced in the accompanying map, is about to be made to Thannah Bhowun. The chief traffic, however (sugar), goes to Shamlee. A small stream (the Katha) runs through the pergunnah, and the Eastern Jumna Canal on the east side sends out three rajbuhâs into it—of which, however, the Boontah Rajbuhâ is below the level of the country, and does comparatively little good in this pergunnah.

3. The former assessment had on the whole worked well. The villages on the west or Bidowleeside of the Katha were rather over-assessed, but the others were doing well, and were populous. The rebellion and drought of 1860 had told severely on the over-assessed villages, and to these chiefly relief was confined. Reductions due to the half-asset principle were necessary in some other villages, but beyond that, only in the villages above mentioned. The average canal irrigation, according to the canal records at the time of the last settlement, was 1151 acres, as against 9 villages, and at the present settlement 3653, as against 16 villages. The canal villages were most prosperous.

Former settlement successful.

Deduced Revenue rates of new settlement.

* See Thannah Bhowun Report, paragraph 11.

4. As the circumstances of the Pergunnah were unaltered since 1840, and prices unaffected,* I maintained the circles and rates fixed by Mr. Thornton, only reducing the rates to half assets. Oon only was an exception, the circumstances of which will be found in the miscellaneous remarks.

The deduced Revenue rates then stood as follows :—

	<i>Meesun,</i> irrigated.	<i>Meesun,</i> unirri- gated.	<i>Roslee,</i> irrigated.	<i>Roslee,</i> unirri- gated.	<i>Dakur,</i> irrigated.	<i>Dakur,</i> unirri- gated.	<i>Bhoor,</i> irrigated.	<i>Bhoor,</i> unirri- gated.
I. Mulhendee	3 12 0	...	1 8 4½	1 0 6½	1 8 8	0 15 9	0 13 1½	0 10 2
II. Jhinhana	2 15 9½	...	1 8 9	1 1 0	1 8 9	1 6 8½	1 4 5½	0 12 5½
III. Gurhee Hus- sunpoor	2 1 10	1 5 6	1 6 4½	1 2 2½	1 9 1	1 7 7½	0 14 10½	0 12 1
IV. Alaw-ood- deenpoor	1 9 1½	...	1 8 7½	0 14 5½	1 8 3	1 0 2	1 4 5½	0 12 9
V. Gungarampoor	2 15 11½	...	1 8 0	0 14 2½	1 6 1½	1 5 1½	0 12 4	0 9 4½
VI. Oon ...	3 12 0	...	1 12 1	1 4 0½	1 8 8	0 15 9	0 13 1½	0 10 2½

Former demand, demand at deduced
Revenue rates, and proposed demand.

The principles of assessment were precisely those detailed in the Thannah Bhowun Report. This per-
gunnah was assessed in 1862 after the Thannah

Bhowun Pergunnah : it is needless therefore to dwell on them here.

5. The former pergunnah jumma was	...	Rs. 63,504
The jumma at deduced revenue rates was	...	,, 43,131
My proposed jumma is	...	,, 56,707

The difference between the 2nd and 3rd of these columns is owing to the assess-
ment having extended to lands thrown out of cultivation in the measurement year by
the famine, and hence not included in the cultivated area.

6. The rates of the new jummas on the malgozaree and cultivated areas of each
circle are given below, as well as those of the whole
pergunnah ; the neighbouring circles of Thannah
Bhowun, Bidowlee, Shamlee, and the neighbouring pergunnah of Gungoh, and the
incidence of the rates in each caste in each circle :—

	<i>Malgozaree Rate.</i>	<i>Cultivated Rate.</i>
1. Mulhendee Circle ...	Rs. 1 13 11½	2 6 2
2. Jhinhana Circle ...	,, 0 15 10½	2 3 5
3. Gurhee Hussunpoor Circle, ...	,, 0 15 11½	1 15 7
4. Gungarampoor Circle ...	,, 0 9 9½	1 11 8½
5. Alaw-ood-deenpoor Circle...	,, 0 7 8½	2 12 6
6. Oon ...	,, 2 2 4	2 10 9
7. Pergunnah Jhinhana ...	,, 1 4 7½	2 4 3½
8. Pergunnah Gungoh ...	,, 1 3 7	1 11 5

The circles adjoining of other pergunnahs are as follows :—

1. Adjoining Gurhee Hussun- Aurungabad Circle (similar to Mulhendee Circle). poor and Mulhendee Circle.	<i>Malgozaree Rate.</i> Rs. 1 14 0½	<i>Cultivated Rate.</i> Rs. 2 9 1½
2. Adjoining Mulhendee, Jhin- Shamlee Circle (similar to Jhinhana Circle). jhana, and Alaw-ood-deen- poor Circle.	<i>Malgozaree Rate.</i>	<i>Cultivated Rate.</i>
3. Adjoining Alaw-ood-deenpoor, Bidowlee Circle (similar to all except Jhinhana Jhinhana, Gungarampoor, and Circle). Gurhee Hussunpoor Circles.	<i>Malgozaree Rate.</i> Rs. 0 9 5	<i>Cultivated Rate.</i> Rs. 1 3 11½

The rates of the assessment on each caste within each circle (formed on the
principles detailed in paragraph 28, Thannah Bhowun
Report) are as follows :—

1. <i>Mulhendee Circle.</i>			
	<i>Malgozaree Rate.</i>	<i>Cultivated Rate.</i>	
1. Jâts ...	Rs. 2 0 8½	Rs. 2 10 9	(seven villages.)
2. Rajposts ...	,, 1 12 2½	,, 2 4 11	(three do.)

1. *Mulhendee Circle.*—(Continued.)

3. Brahmins ...	Rs. 2 0 6½	Rs. 2 10 11	(one village.)
4. Beloch ...	„ 1 10 4½	„ 1 15 6	(four villages.)
5. Goojurs ...	„ 1 10 5½	„ 1 14 6	(one village.)
6. Pathan ...	„ 1 2 9	„ 1 7 5½	(one do.)

2. *Jhinkana Circle.**Malgoozaree Rate. Cultivated Rate.*

1. Jats ...	Rs. 0 15 8½	Rs. 2 4 4	(six villages.)
2. Goojurs ...	„ 0 9 6½	„ 1 13 6½	(three do.)

3. *Gungarampoor Circle.**Malgoozaree Rate. Cultivated Rate.*

1. Rajpoots ...	Rs. 0 9 0	Rs. 1 9 3	(one village.)
2. Pathans ...	„ 0 10 8	„ 1 13 10	(two villages.)
3. Jâts ...	„ 0 7 7	„ 2 1 10½	(one village.)

4. *Gurhee Hussunpoor Circle.**Malgoozaree Rate. Cultivated Rate.*

1. Rajpoots ...	Rs. 0 12 7	Rs. 1 14 4	(six villages.)
2. Rors ...	„ 1 4 10½	„ 2 3 7	(one village.)
3. Goojurs ...	„ 1 2 11½	„ 1 9 5	(three villages.)
4. Jâts ...	„ 1 5 11½	„ 2 6 11	(one village.)

In the Alaw-ood-deenpoor Circle there is only one caste (Goojurs), and in Oon a single village (Jâts).

7. In one village only, Putnee Pertahpoor, was a rusudee jumma considered necessary. The details of this village are in the miscellaneous remarks.

One Rusudee Jumma.

8. There were 210 Lumberdars at the time of re-settlement; they have been reduced to 147. The Putwarees' Circles have been modified, and there are now 34, in lieu of 32, of which the highest pay is Rs. 150, and the lowest Rs. 77; maâfee villages confiscated in the rebellion have been brought on the Towzee since 1857.

9. The various statements submitted will be read with interest, especially those compiled from the former and new records, as these may be regarded as substantially correct. Transfers, it will be seen, amount to about one-fifth, averaging, in the case of private transfers, to about 5 years' jumma, and in transfers by order of Court to between 3 and 4 years' jumma. Of these transfers rather less than 1-4th, or 1-20th, of the whole area, are into the hands of the mahajuns. The remarkable increase in tenants with right of occupancy will be noticed—being as 488 to 16; while the average holding of each is little more than an acre. The average holding of cultivating proprietors, 8 acres, is much the same here as in other pergunnahs. The cultivated area, including recently-abandoned land, is a little less than that of the last settlement. The large amount of recently abandoned land must be attributed to drought and the disturbing effects of the rebellion. The causes of the stationary amount of cultivation have been touched on in paragraph 17 of my Thannah Bhowun Report.

10. All the jummas were taken up promptly, and I hope that by a moderate demand I have assisted in opening out a prosperous future for the landholders of this pergunnah.

Mozuffernuggur : }
The 8th January, 1864. }

A. COLVIN,
Settlement Officer.

FROM

W. C. PLOWDEN, ESQUIRE,

*Secretary, Sudder Board of Revenue,**North-Western Provinces,*

TO

R. SIMSON, ESQUIRE,

*Secretary to Government,**North-Western Provinces.**Dated Allahabad, the 5th November, 1864.*

SIR,

I AM directed by the Board of Revenue to request that you will obtain the sanction of the Hon'ble the Lieutenant-Governor to the exclusion from the permanent settlement of the pergunnahs of Bidowlee and Gordhunpore, in the Mozuffernuggur District.

2. *Gordhunpore.*—This pergunnah is suffering from bad drainage, caused either by percolation from the Ganges Canal, or other cause. Efforts are now being made to introduce an effective system of drainage by the Canal Department. Whether this be early successful (as there seems ground for hoping) or not, it is evident that the present resources of the pergunnah cannot form any index of its eventual resources when reclaimed. It would not be possible to determine even prospectively a fair permanent assessment. Indeed, looking to the present condition of the tract, and its liability to flooding from the Ganges and Solani rivers, and the uncertainty as to the result of drainage operations, the Board support the proposal made by the Collector in his demi-official note dated 7th ultimo, copy of which is enclosed, that the present settlement of the pergunnah be confirmed only for ten years. Under present circumstances there would be no object gained by a lengthened settlement.

Bidowlee.—The Board accept Mr. Martin's statement that, for the reasons already stated, there are no grounds for assessing a permanent jumma on the pergunnah, and that anything like an adequate assessment could not at present be borne by the population. The malgoozaree area is 41,000 acres, of which 20,500 are uncultivated. The rates are—malgoozaree, Rs. 0-10-1½; cultivated, Rs. 1-4-2½;—while those of adjoining pergunnahs in Mozuffernuggur are—

Malgoozaree.				Cultivated.			
Rs.	1	4	7½	Rs.	2	4	3½
„	1	0	8½	„	1	8	10½

and of Gungoh, in Seharunpore—

Rs.	1	3	7	Rs.	1	11	10
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The Board accordingly support the proposal that this pergunnah be excepted from permanent assessment.

4. These tracts fall into the first of the two classes described in the Board's Circular Order No. 18, dated 1st August, 1864—viz., first, backward in agriculture, with low rates of rent.

I have, &c.,
(Sd.) W. C. PLOWDEN,
Secretary.

No. 1410A. OF 1864.

FROM

J. D. SANDFORD, ESQUIRE, B.A.,
*Junior Secretary to Government,
North-Western Provinces,*

TO

W. C. PLOWDEN, ESQUIRE,
*Secretary, Board of Revenue,
North-Western Provinces.*

Dated Camp, Allygurh, the 25th November, 1864.

SIR,

REVENUE DEPT.

IN reply to your letter No. 795 dated 5th instant, I am directed to state that the reasons given by the Sudder Board of Revenue seem to the Lieutenant-Governor to be conclusive against the propriety at present of a permanent settlement of the pergunnahs of Bidowlee and Gordhunpore, in the Mozuffernuggur District.

2. The original enclosures of your letter are returned.

I have, &c.,

(Sd.) J. D. SANDFORD,
Junior Secy. to Govt., N. W. P.

No. 579 OF 1864.

FROM

W. C. PLOWDEN, ESQUIRE,
*Secretary, Board of Revenue,
North-Western Provinces,*

TO

F. WILLIAMS, ESQUIRE,
Commissioner, Meerut Division.

Dated Allahabad, the 5th November, 1864.

SIR

REVENUE

Present:
W. MUIR, Esq.,
Senior Member.
R. MONEY, Esq.,
Junior Member.

IN reply to your letter No. 528 dated 24th September last, I am directed to inform you that, as proposed, the Board of Revenue have recommended to Government that Pergunnah Bidowlee and Gordhunpore, in the Mozuffernugger District, be excluded from the permanent settlement.

2. But with regard to Pergunnah Bidowlee, I am desired to state that the Board are not satisfied that Mr. Colvin may not have gone too low in his assessment. He reduced the assessment from Rs. 37,950 to Rs. 25,960. The reduction appears very large, and it is questionable whether it was fully justified. The Government are in nowise bound to confer a half-asset settlement calculated by the existing assets of a tract of which 50 per cent. of the culturable area is left out of cultivation. The opposite course has been followed in Gungoh, the adjacent Pergunnah of Saharunpore,

situated very similarly. It is hardly fair to Gungoh to assess Bidowlee at such a great advantage to the lazy proprietors.

3. Mr. Martin should be desired to revise all the assessments, and to see that the Government assessment has not been unduly sacrificed. A sufficient margin should be left to prevent deterioration, but that need not necessarily be more than 35 to 40 per cent. of the assets.

I have, &c.,

(Sd.) W. C. PLOWDEN,
Secretary.

No. 92.

FROM

S. N. MARTIN, ESQUIRE,
Collector, Mozuffernuggur,

TO

F. WILLIAMS, ESQUIRE,
Commissioner, Meerut Division.

Dated Mozuffernuggur, the 13th September, 1864.

SIR,

I do myself the honor to submit two statements for Pergunnahs Bidowlee and Gordhunpore, containing reasons for excluding both these backward tracts from the benefits of a permanent settlement; data is so imperfect that I am unable to fix a maximum jumama, and my object in submitting these statements is to ascertain from superior authority whether the exclusion of these pergunnahs is under the circumstances in accordance with the views of Government.

2. It is as well to ascertain this point at once before further steps are taken. Mr. Colvin the Settlement Officer who assessed Bidowlee, has recorded a memorandum recommending the assessment of "Bidowlee" be made permanent, mainly on the consideration that a temporary settlement is not likely to mend matters; that it has already failed, and that honest men would prefer leaving the rogue to pay 10 annas the acre as long, as he did not molest his neighbours, to making him pay Rs. 1-8-0 at the risk of his becoming a perpetual pest and nuisance to everybody all round.

3. After giving the subject mature deliberation, I am unable to accord with Mr. Colvin. We must make the best of the Goojur tribe, no doubt: to expel them from their haunts, and to supply these places by a more industrious class, is simply impossible—to attempt such a thing would be folly, and no practicable man would ever try it; a considerable admixture, however, may take place to the advantage of all parties. Seeing, then, the abnormal state of things that now exist in Bidowlee and Gordhunpoor, I am unable to propose it be made permanent. I think it safest to wait till the close of another temporary settlement, and then, with the accumulated experience of the past, something positive may be determined for Bidowlee. I doubt if the condition of Gordhunpore will ever be anything else than variable.

I have, &c.,

(Sd.) S. N. MARTIN,
Collector.

I propose making both Bidowlee and Gordhunpore temporary settlements, say for ten years—after that, subject to revision.

PERGUNNAH BIDOWLEE.

1. MEASUREMENTS were commenced in this pergunnah in October, 1860, and completed in May, 1861.

2. The assessment was completed in December of the same year. The results are separately noted.

3. This pergunnah is inhabited chiefly by Goojurs and Rangurs; there are also a good many Syuds, a few Jât villages, a sprinkling of Rors and Pathans, and one village of Tuggas. The principal markets, besides Bidowlee, are at Jhinjhana and Kurnal. The soil is favorable to simple sunk wells, which, almost throughout the pergunnah, can be dug at a cost of 7 or 8 Rs., and last certainly for one fusil, ordinarily for a year, irrigating about 4 acres. In the low lands bordering the Jumna an outlay of Rs. 2 or 3 will provide a well; but here the soil being naturally moist and fruitful, wells are little required.

4. There is no canal irrigation. Whether a rajbuha leaving the Jumna in the Gongoh Pergunnah might not be run through Bidowlee is under consideration.

5. It must not, however, be understood that, because wells can be cheaply made, the soil is naturally generous: on the contrary, it is rather below the average. There is in many parts a large admixture of Bhoor, and the Roslee is of its kind rather inferior. The cheaper and coarser crops are the most frequent—joar, gram, mundwa, and cotton (baree) are tolerably healthy and abundant. Wheat, except in the Khadir, is invariably poor. Maize and sugarcane are to be found in few other than Jât villages,—even the Jâts growing them with indifferent success.

6. Independently of the natural poverty of its soil, the pergunnah is seriously injured by what is known as “reh.” This, rising from the Jumna, renders large tracts of land unculturable, and in a week or ten days will entirely kill a flourishing crop; on the other side of the Jumna it is equally prevalent. The villagers say that manure is fatal to it; but manure, little enough used in this district by the better class of cultivators, is almost entirely neglected in Bidowlee. Thus it will be seen that of a total cultivated area of 23,317 acres, 2,251 only were recorded as “Meesun” during the measurements, of which 514 are to be found among the seven Jât villages.

7. The course of the Jumna, which enters the pergunnah from above, has of late years materially altered. Instead of running as represented in the map, it now places on its Kurnal bank six villages,—viz., Nuseerpoor, Nulwee, Dubharhe, Choondeypoor, Rusoolpoor, Nugla Neghuh,—and much of the lands of two or three others. It is yearly eating more and more into the pergunnah.

8. More than one-half of Bidowlee is enshrouded in thick dhâk forests, used partly by the Goojurs as hiding places for themselves and their stolen cattle; keekur trees are also abundant, and might, perhaps, if disposed of to the Railway Engineers, command some profit; but no demand has reached the people, who are too indolent to cut and carry them unless sure of a ready market.

9. Bidowlee has been long known as one of the most unsatisfactory pergunnahs in the district. For many years it has been suffering from over-assessment; but the troubles of 1857-58, and the famine of 1861, have reduced it to a very bad condition. The pergunnah was once thickly inhabited by Syuds, whose descendants still cling to it; though impoverished and almost beggared, there are not wanting signs of former prosperity. Some village sites show evident traces of having formed the centres of considerable life; in almost every village is to be found the decaying fort of some decayed family. Wells constructed with masonry are abundant; but, while the old wells have been neglected, few new ones have been built. There were

929 at the last settlement. There are now 1,030, but 113 have been allowed to fall out of order. In 1860-61 there were 294 kutchu wells. Little by little, the population have slunk away, as the settlement of 1838 became more and more intolerable. Most of the Syud proprietors have long since declared themselves insolvent, and allowed their estates to be made over in farm to the resident villagers. These in their turn have absconded; then the village has been farmed by neighbouring cultivators, who, again, in a year or so have declared themselves unable to meet their Government demands; and so, for a longer or shorter period, the village has been thrown back into the hands of Government. The inhabitants, finding that even active cultivation will barely meet the jumma, have, as a rule, ceased to interest themselves in agriculture. The Nawab Ahmed Ali Khan, of Kurnal, is content to pay the Government demand, and see his lands lie waste; while Syud Mehndee Hussun, of Bedoulee (lately in the service of the former King of Oude), attempting to induce a better class of cultivators to enter the pergunnah, was met with such resistance by the Goojurs and Rangurs that, unable to keep his Jâts in comfort and security, he was obliged to let them go.

10. Distress, as might be expected among such a population, has had its usual effects. The Goojurs and Rangurs, naturally thieves, have been further demoralized by pinching circumstances. Even the better-disposed classes, such as Syuds and Pathans, finding they could scarcely wring out an honest livelihood, have been found to enter heartily into the cattle-lifting of their neighbours; while the sudder station, with its staff of Magistrates, being 37 or 38 miles distant, there have been found little means of forcing the people back to their proper pursuits by a just fear of speedy punishment.

11. It is evident that such a pergunnah required consideration; nor was it an easy matter to judge how far such consideration should extend. There were no flourishing villages,—few villages even ordinarily well to do;—no successful rates or neighbouring jummas to which reference might be made. The Gungoh rates proved higher than it seemed wise to enforce. On the one hand, the revenue was to be lowered; on the other, “rusudee” jummas were to be avoided. A jumma to be paid for 30 years was to be discovered, which, without prejudicing the claims of Government, should be such as could be at once met by the cultivators. Obviously this has not been an easy task. There has been only a negative standard—a standard to avoid, but none to guide. I cannot in any way boast of having discovered the clue to the problem. The result must show how far the jumma now fixed upon is reasonable.

12. The out-turn exhibited in the nikasee was of little aid. Where there had been such imperfect cultivation, there could be no index to the capabilities of the pergunnah; money rates scarcely prevailed at all. But following the principles laid down by the Collector, it appeared that the appraisement of Mr. Thornton, conducted in the last settlement, exhibiting the ordinary out-turn per acre of the various crops, would be of singular aid. By the help of Appendices Nos. 1 and 2 of Mr. Thornton's Report, it was possible to form rates according to prevailing prices for the different kinds of soil, which might fairly be taken as average rates. But the proportions given in Appendix No. 1 do not by any means tally with the actual proportions in the Bedoulee Pergunnah. Sugar-cane and wheat, for example, are there grown in smaller quantities. The proportions might have been ascertained with tolerable accuracy from the nikasees; but another difficulty was introduced by the present depressed condition of the pergunnah Meesun, with the return of cultivators, and in better years, may be expected to increase largely. The records of the former measurements, showing the quantities of the then existing kinds of soil, were lost in the mutinies. An estimate formed on the basis of present classifications of soils would prove, it was considered, fallacious; nor did it seem practicable to find an accurate rate on irrigated or unirrigated lands. Cultivation is at present so neglected that no data could be ascertained on which such rates suitable to a settlement of 30 years could be founded.

But, combining the cultivated area as exhibited in the nikasees with Mr. Thornton's tables of out-turn given in Appendix No. 2, a result was arrived at which appeared on the whole more satisfactory. Thus, counting as the out-turn of an acre sown with joar according to the nikasees, the out-turn according to Mr. Thornton's tables (the nikasee showing the relative area occupied by the various crops yearly grown, and the table giving the out-turn per acre of those crops), and applying average present prices, a rate of cultivation to some extent admissible has been obtained.

13. It is true that the nikasees are not believed to represent accurately either the nature of the various crops grown, or the area belonging to each. For each field they probably do not, but approximately it will be found that they do. The conclusion, therefore, that they were for this purpose sufficiently accurate having been arrived at, and the nikasees of several years, combined with the appraisement tables, having supplied the rate above mentioned, it was applied to the average of 5 years' cultivation throughout the pergunnah, excepting only the Jât villages. The average of those 5 years (1259-63) was no doubt less than the cultivation may be expected to reach; but it was scarcely less than the cultivated area of the last settlement, and considerably larger than the area cultivated in 1860-61. It was an area nearly as large as experience has proved Bedoulee capable of reaching, and beyond that it was scarcely safe to go; for cultivation among such a population, and with indifferent soil, will extend, at the best, but slowly. Moreover, there is little doubt that the results exhibited in the tables referred to are, on the whole, higher than the present actual average out-turn of the soil in this pergunnah. On a separate sheet will be found the average computed from claims in summary suits regarding Bedoulee during 1264-65-66.

14. The pergunnah jumma yielded by this method of rating cultivation gives a malgoozaree rate of 11-3, and a rate on the cultivation of Re. 1-6-5. The malgoozaree rate, strictly applied to the different villages, exhibited, as a rule, a series of jummas which, though considerably lower than their predecessors, appeared rather above the mark. On continued enquiry, however, it was found that land-holders and officials acquainted with the country agreed pretty generally upon jummas nearly similar to those which had been arrived at, as mentioned above. Some villages enjoying a slight superiority of soil, a greater number of wells, or owned by capitalists, might be expected to rise above the average; others certainly fell below it. Where a village, from want of wells, defect of soil, or other similar cause, was clearly below the average, the rate has been slightly lowered. Where the village had fair capabilities, but was at present reduced, the rate was retained, as offering a moderate standard which ordinary labour should reach. Where a village has been raised above the average, it has been with extreme caution. Considerable knowledge of the pergunnah enabled me to distinguish pretty accurately, I believe, between villages inferior *in se*, and those which were merely distressed from over-assessment. Where grazing land was in excess, as was not unfrequently the case, I have preferred maintaining the standard rate to guessing at the probable income accruing to zemindars from grazing fees. These fees vary considerably, and are not easily realized. In 1266, Ahmud Ali Khan, Nowab of Kurnal, brought in the Mozuffernuger Collector's Court a summary suit to recover from his tenants Rs. 30 for 10 head of cattle, at Rs. 3 each yearly, or 4 annas monthly. He was non-suited, the charge being considered irregular.

15. With the Jât villages I have interfered little. Their rates were reasonable, their condition prosperous. Cultivation, as regards extent of soil, had reached its limits, and there was no reason to suppose that any plethora of wealth existed among them.

16. The people, as a rule, have hailed the new jummas with satisfaction. The annexed tables will show the areas of the present and former settlements, and the other statistics of the pergunnah hitherto proceed. It will be seen that between the former jumma, Rs. 42,656, and the present, Rs. 28,838, a difference of Rs. 13,818 exists.

17. Syud Mehndee Hussun, of Bedoulee, and one or two other Syuds, are doing their best to restore the pergunnah to an ordinary state of prosperity. They are again introducing Jâts, and trying to overawe the Goojurs. Meanwhile, the system of Police has been improved, and a Deputy Magistrate is stationed at Shamlee, but 10 or 11 miles from Bedoulee. It is scarcely probable that the Goojurs and Rangurs will at once abandon their old habits; but if they find that the Police are more active, and at the same time that a return to agriculture does not involve ruin and discomfiture, it is to be hoped that they may gradually lean to better habits.

18. A considerable amount of balances, both of 1268 and 1269, remain to be accounted for in this pergunnah. These, I take, it will be reported on separately.

CAMP HYBUTPORE :
The 15th February, 1862.

A. COLVIN,
Offg. Deputy Collector.

APPENDIX I.

Statement showing proportion of wells to area.

Proportion of pukka wells to Malgoozaree.	Proportion of pukka wells to cultivation.	Proportion of kutchra wells to malgoozaree.	Proportion of kutchra wells to cultivation.	Total proportion of wells to malgoozaree.	Total proportion of wells to cultivation.
1·52	1·36	1·156	1·79	1·29	1·20

APPENDIX II.

Statement referred to in paragraph 13, showing comparative average out-turn of the principal crops, computed from summary suits.

Acres.	Maunder.	MR. THORNTON'S TABLES.	
		Acres.	Maunder. Seers.
1	Wheat, ... 6	1	7 15½
1	Barley, ... 4	1	6 34½
1	Gram, ... 5	1	5 7

Money rents compared with Pergunnah Thannah Bhowun, an average pergunnah, shown by the summary suits, as follows :—

Bedoulee.				Thannah Bhowun.			
Rs. As. P.				Rs. As. P.			
Sugar-cane...	...	7	0 0 per acre.	Sugar-cane	...	12	0 0 per acre.
Mundwa ...	...	3	0 0 "	Mundwa...	...	3	8 0 "
Churree ...	...	1	14 0 "	Churree ...	...	3	0 0 "

PERGUNNAH KYRANAH.

Pergunnah when assessed.

THIS pergunnah was assessed in June, 1863, having been inspected in the cold weather of 1862-63.

2. The pergunnah has three distinct classes of villages, and these I grouped together for purposes of assessment. The best are those lying in the Khadir, the spring crops of which are very fine. The next are the villages with a poorer soil, but abundant irrigation and ample population, brought together in the Kyranah Bangur Circle. The last and worst is the clump of villages lying across the Katha. They resemble in every respect the Bedoulee villages, being as indifferent in soil and cultivation, and as unfortunate in their Goojur proprietorship. The only large town is Kyranah,—perhaps the largest town in the district. It carries on a large trade in the export of tobacco, and has a population

of Sheikhs and Goojurs who are well to do. One road comes in from Shamlee, another from Jhinjhana, and a third from Kandlah, and a road leaves Kyranah for the Punjab Ghât. Along this road, and from Kyranah to Shamlee, the chief traffic goes, and it should, if possible, be metalled, being naturally sandy and heavy. The villages

of the pergunnah are owned almost entirely by Goojurs, and are, as usual, chiefly Bhyachara. The former assessment was very light. Had it not been for fear of too rapid an increase in the demand, I should have increased the jumma considerably more than I have done, for in every pergunnah where an increase, though fair even with due regard to outlay, was excessively large, I have gone somewhat below it, believing that a sudden shock to the landlords, and change in their means of subsistence, would inevitably lead to distress, and degrade them from the position of comfort and independence in which I found them. Even the Trans-Katha villages, ill-cultivated as they appear, had been reasonably and fairly assessed, and were, as a rule, well off, and afforded in that respect a strong contrast to the Bedoulee Pergunnah. I may add that the rates of the old settlement on their malgoozaree and cultivated areas answered to my new Bedoulee rates—an omen, I trust, of the future prosperity of that pergunnah.

3. The average canal irrigation at the last settlement was 818 acres, as against 6 villages; and at re-settlement by the canal papers, 10,078, as against 17 villages.

4. I made three fresh circles, as shown in the accompanying map, and placed a few villages in the Shamlee Circle. The rates I formed, except in the Rana Muzra Circle, where I adopted Mr. Thornton's Bedoulee rates, were altogether new, formed on the same principle as those detailed in paragraph 4 of the Shamlee Report. I could find no former rates, or any mention of the pergunnah, as a whole, in the printed Settlement Reports, though I believe Sir H. Elliot settled it. It was the only pergunnah in which I had not that assistance. The rates I adopted were as follows:—

	<i>Meesun irrigated.</i>		<i>Meesun unirrigated.</i>		<i>Roslee irrigated.</i>		<i>Roslee unirrigated.</i>		<i>Dakur irrigated.</i>		<i>Dakur unirrigated.</i>		<i>Bhoor irrigated.</i>		<i>Bhoor unirrigated.</i>									
	R.	A. P.	R.	A. P.	R.	A. P.	R.	A. P.	R.	A. P.	R.	A. P.	R.	A. P.	R.	A. P.								
Kyranah Bangur,	3	0	0	2	8	0	2	0	0	1	6	0	1	4	2	0	15	6	0	14	11			
Kyranah Khadir,	3	10	0	3	0	0	2	6	0	1	14	0	1	10	2	1	1	0	0	15	6	0	14	11
Rana Muzra ...	2	12	10	1	15	2	1	8	3½	1	5	8½	1	4	2	1	0	2	0	15	6	0	8	0
Shamlee ...	3	2	6	3	1	2	3	0	0	2	1	2	1	14	11½	1	7	1	1	0	3½	0	12	0

Former and proposed demand. 1.—The former demand = Rs. 49,571
2.—The demand at deduced revenue rates = Rs. 60,842
3.—My demand = Rs. 52,687

The difference between 2 and 3 is owing to the causes detailed in paragraph 2.

Rates of the new demand on each circle ;
follows :—

5. The rates of the new settlement for each circle, and for each caste within each circle, were as

		<i>Malgoozaree Rate.</i>	<i>Cultivated Rate.</i>
1 {	Circle Kyranah Bangur ...	... 1 5 1	1 12 1½
	Circle Shamlee ...	... 1 12 1½	1 15 9½
	Circle Kyranah Khadir ...	... 0 13 11½	1 1 10½
	Circle Rana Muzra ...	... 0 11 1	1 6 0½
	Pergunnah ...	... 1 0 9½	1 9 0

And on each caste in each circle.

<i>Circle Kyranah Bangur.</i>	<i>Circle Kyranah Khadir.</i>
All Goojurs.	All Goojurs.
<i>Circle Shamlee.</i>	<i>Circle Rana Muzra.</i>
(6 villages) Goojurs, 1 11 2½ 1 15 2	All Goojurs.
(1 village) Brahmins, 2 1 2 2 3 1	

6. It is unnecessary to dwell further on the assessment. I followed the principles laid down in my Thannah Bhowun Report, and allowed myself to deviate to any

extent that seemed necessary from the rates when occasion arose, explaining such instances in the miscellaneous remarks. I have faith in rates as a general guide, but the impressions received from acquaintance with the pergunnah give the Settlement Officer confidence in departing from these rates, and a power of discriminating between their use and abuse which he could not otherwise attain. Not, however, that this acquaintance alone, without rates, will enable him, as is sometimes said, to form a demand; and if it did, it would not give him any ground on which he could recommend the adoption of his jummas; for a man's local knowledge may outrun his discretion, and nothing but the test of rates can check the shortcomings of the judgment.

Increase in demand owing to the canal. 7. The increase owing to the canal, as shown in the statement accompanying, is—

8. The Lumberdars have decreased from to , and the Putwarees from Lumberdars and Putwarees. to . The highest pay is and the lowest

9. Balances have been separately reported on. Separate reports have also been written in the case of two Goojur villages whose case Balances. was peculiar and abnormal.

10. With the exception of those villages, all the jummas were promptly taken up.

11. Transfers in this pergunnah amount to less than one-eighth of the whole area, Remarks on statements submitted —the price of private transfers being about 8 years' with the report. jumma, and of transfers by order of Court about 7 years' jumma. Of these transfers, rather more than one-third are into the hands of mahajuns; the rest amongst miscellaneous castes, and chiefly amongst the caste of the particular transferrer.

12. The cultivators with right of occupancy have increased from 17 to 648 in the villages of which the records are forthcoming, the average holding being 5 acres. Tenants-at-will are much as they were, and cultivating proprietors are 1,484, as against 1,331, holding here, as elsewhere, about 10 acres.

MOZUFFERNUGGER :
Dated the 8th January, 1864. }

A. COLVIN,
Settlement Assistant.

Memorandum on Pergunnah Bedoulee (supplementary to the report already submitted).

In submitting the No. II. Statements and other statements of the Bedoulee Pergunnah, I think it necessary to add a few words to the previous report.

2. It will be seen that in the Miscellaneous Remarks the jumma at the "average malgoozaree rate" is always given, and the extent to Remarks on No. II. Statements. which the jumma departs from that rate is the chief object of explanation. The difference between the proposed jumma and the jumma at "deduced revenue rates" is rarely touched on. My grounds for taking the malgoozaree rate as the basis for my assessment are given in my first report. Having taken it as a basis, it of course became necessary for me to explain more especially, in every instance, the causes of a difference between the jumma afforded by that rate and the proposed jumma.

3. The circle rates of Mr. Thornton, when modified on the half-asset principle, were not high;—they represented, that is, the capabilities of the land under ordinary management, Ms. Thornton's circle rates. but they did not represent the out-turn of the land under Goojur management. It

would have been possible to frame rates that would approximately show such an out-turn, but the cultivated area of 1860 was, in consequence of the disturbance of 1857, of assessment too high for Goojurs, and of draught, so reduced that the kinds of soil to which such rates would be applied bore an abnormal proportion to each other. It would have been possible to anticipate an increase of cultivation, but I was not willing to guess at an increase of irrigation arising from the return of cultivators and renewal of agriculture. Similarly, I believe it hazardous to guess at the future quantity of manured land. On the other hand, it appeared injurious to Government to assume the existing quantity as representing a fair proportion.

4. Under these circumstances, I believe I did right in taking the actual cultivated area of ordinary seasons for the basis of my assessment, and in adapting to that area, and the kinds of crops shown by the nikassees to have been grown on it, the average estimate given in Appendix 2 of Mr. Thornton's Report.

5. It may be objected that this form of assessment does not show to officers coming afterwards a fair rate at which they may value land in cases where Government may require it; but, under Circular X., June 16th, 1854, the *cultivated rate* of the jumma forms the basis of such valuations. Besides, as has already been said, the circle rates of Mr. Thornton are not, as representing the capabilities of the land, too high, and will be sufficient in such cases.

6. The result has been a very great reduction.

Demand at deduced revenue and other rates, and proposed demand.	My revised jumma, it will be remembered, is	= Rs. 28,931
The jumma at Mr. Thornton's rates would have been		= „ 29,479
But this is calculated only on the present reduced cultivation. The jumma at the average malgoozaree rate (and for the Jât villages at the circle rates) would have been		= Rs. 27,431 Goojurs. „ 5,685 Jâta.
		<hr/> Rs. 33,116 <hr/>

7. I have not shrank from the reduction, and, after two years' further experience, I believe that the new pergunnah jumma is not one bit too low. I adopted as my test the following paragraph from Directions for Settlement Officers :—

Para. 188.—“ When the zemindars are themselves the criminals, as is sometimes the case with certain classes,—such as Goojurs, Mewatees, and Mhairs,—their reclamation from these vicious courses, and their future pursuit of an honest livelihood, greatly depend upon the Settlement Officer. Villages belonging to such persons will generally be found poorly cultivated, *nor ought an assessment proportionate to the capability of the soil to be fixed upon them.* If the land of such person be moderately assessed, and his interest in it clearly defined, he will not be slow in finding out that his profit lies more in the improvement of his property, than in neglecting it for the hazardous pursuit of plunder. This may not be at once the case. It will require continued vigilance on the part of the Magistrate, and perhaps some examples of destruction of property by sales of estates for arrears of revenue, before the lesson be learned. But the labours of the Magistrate will be lightened, and the force of the examples increased by judicious arrangement on the part of the Settlement Officer. If the assessment be too heavy, or rights undefined, the progress made in the moral reclamation of the people cannot but be slow.”

8. The picture that I have drawn in the previous report of the state of the pergunnah is but a faint resemblance of the reality. Mr. Edwards' remarks on the pergunnah. Mr. Edwards, in the following passages of his notes (a copy of which is in the Board's Office), gives a more graphic sketch. I would premise

that where he speaks of the pergunnah as over-assessed he apparently means relatively over-assessed, and that the same qualification must be placed on my remarks in my former report.

9. " This pergunnah is perhaps the worst in the district. The soil is generally " bad. If rain falls in excess, the crops rot in the ground, and the land becomes " sticky swamp. If, on the other hand, there is a scarcity of rain, it yields no return ; " the seed fails to germinate. Efflorescence of ' reh ' prevails in many parts, and is, " I fear, on the increase."..... " A zemindar regards sugar-cane as his sheet-anchor ; " but in this pergunnah only a very few villages can grow it, owing to the inferior " nature of the soil."..... " The settlement, it is evident, *broke down in several villages* " *at least 12 years ago*, since which time village has propped up village ; an adjoining " community, if thriving, has been called upon to aid its sinking neighbours in meeting " their engagements. The arrangements were left in the hands of the Tehseeldar, who " portioned out the lands to be cultivated partly among the people of the village, but " the greater portion among those of the surrounding mouzahs, each being held " liable for a quota of the Government revenue. This strange and irregular practice " appears to have been generally acquiesced in by the people, and it is *difficult to see* " *how, without revision of Government, the jumma could otherwise have been realized, inas-* " *much as the severity of the assessment virtually precluded sale or farming leases. No-* " *body would have anything to do with villages where there was an annual deficit, where* " *the soil was so inferior that the land which yielded crop one year must be left fallow the* " *next, and where the population was mainly, if not entirely, Goojur, and scanty in* " *number.*"

10. Other passages similar to the above might be added, but enough has been given to show Mr. Edwards' opinion of the pergunnah. Among other things, he notices the impossibility of getting any other caste to live in it.

11. It should be noticed that the whole pergunnah does not contain a single market, and that many villages have not only bad roads, but, during a great part of the year, swollen streams between them and their markets.

12. It should also be observed that the whole reduction of jumma is not entirely owing to *bonâ fide* reduction. The former jumma was Rs. 63,984 (and the jummaundec has certainly not increased, nor, as will be seen from my Report on the Thannah Bhowun Pergunnah, have prices risen), the jumma of which (after deductions for cesses) is at half assets 31,093. My jumma, after deductions for cesses, is Rs. 28,838, leaving only Rs. 2,255 actually due to *bonâ fide* reduction. This much must be put down to the miserable condition of the pergunnah.

13. At the same time it cannot be concealed that the great difference between the former and the present demand has created much disgust in the neighbouring pergunnahs. Some of the men of these pergunnahs affect to believe that my jumma is unnecessarily low, and it is probable that they will inoculate with this belief future officers ignorant of the circumstances of the case, and amazed at the lightness of the demand. I am certain it is not, under the circumstances, considering the nature of the soil, the paucity of cultivators, and the vile laziness of Goojurs, too low. But it is natural that honest men should feel envious at the success of a bad reputation. The Goojurs have, as all men see, got the better of us. They have driven us to confess that rates suitable to land must be abandoned when land is held by thieves. They have triumphantly shown to their more honest brethren that rascality, and not honesty, is the best policy. My own wish would have been to assess all villages *owned* by Goojurs at fair rates,—i. e., to maintain the jumma as a rule, and sell up and drive out remorselessly all defaulters. The instructions in Directions for Settlement Officers, however, would not admit of this. Villages owned by honest men, but cultivated by Goojurs,

deserve all indulgence, as the landlords are driven against their will to bad cultivation, and to assess such villages fairly would ruin the landlords without punishing the Goojurs.

14. Transfers, it will be seen, have been few. Land in Bedoulee, as has been pointed out, is avoided. They are chiefly amongst the occupants themselves, and the price paid does not equal two years' jumma.

15. The proportion of cultivated land, and the proportion borne by the inferior crops, as compared with the other pergunnahs, will prove interesting. The smallness of the population may also be noticed. This is chiefly due to an assessment higher than Goojurs would pay, and consequent desertion of the land; partly to the drought of 1860-61.

16. There were 166 Lumberdars at the last settlement; there are now 119. The Putwarees' Circles have been reduced from 23 to 18; the highest pay is Rs. 140, the lowest 81.

17. The population, as stated in the papers of measurements of village sites, is 219 per square mile, as against 283 in page 110 of Christian's Report on the Census. It is about half the population of average pergunnahs. The whole area is now entered at 87 square miles, as against 96 in Christian's Report, the difference being due to the transfer of certain villages, separately reported on, to Kurnal.

18. A separate report on the propriety of making the present settlement of this pergunnah permanent has been furnished to the Collector, and therefore the subject is omitted here.

Separate report submitted regarding the permanent settlement of this pergunnah.

MOZUFFERNUGGER :
The 8th January, 1864. }

A. COLVIN,
Settlement Assistant.

WITH reference to making permanent the revised demand for Pergunnah Bedoulee, Mr. Colvin remarks:—

"Bedoulee is a pergunnah inhabited either by Goojurs, or for the most part by castes of a similar kind. The greater part of the land is owned by these men, and almost the whole cultivated area is cultivated by them. Owing chiefly to their indolent habits, and their indifference to agriculture, the pergunnah is in a very backward state of cultivation. More than one-half is uncultivated; hence the Government demand in the present settlement has fallen at a very light rate. It was believed impossible, unless the ownership and cultivation of the greater part of the pergunnah were transferred to other hands, to impose other than a comparatively trifling demand. The assessment is, perhaps, three-fifths of what, *ceteris paribus*, it should be.

"2. Under these circumstances, it is questioned whether the present revised assessment should be declared permanent.

"3. There are, I think, two considerations here: the one whether Government, consistently with a due regard to its rights and interests, should render permanent so exceptional an assessment; the other, whether a tax so relatively light with regard to other land-owners can be justly declared permanent.

"4. With regard to the first. The present assessment is no doubt very light, but is this any reason for supposing that a temporary settlement would enable Government hereafter to increase the demand? The result of the last temporary settlement has been a reduction of Rs. 13,000 in the demand. I know of no instance in point. The Goojurs in Kandlah have certainly increased their cultivation; but they are peculiarly placed, the canal irrigating every inch of their soil. Whether a light

assessment, without extraneous advantages, will have a similar result, is, as far as I know, matter only of conjecture. As a rule, I have found in this settlement that where no concurrent advantages existed, an assessment light in itself had not in the case of other indolent castes increased cultivation. If the Goojurs and Rangurs were men who look to agriculture for a livelihood, I should suppose that a light assessment would extend the cultivated area, and improve the cultivation. But their chief support is from cattle, and this employment at once supplies them with a motive for maintaining large tracts of uncultivated land, and materially diminishes their necessity for bringing land under the plough. Nothing, I believe, would outweigh this motive but some agent not only bringing greater profits than cattle-stealing and cattle-breeding, but profits sufficiently great to supplant the old pleasant habits of indolence and theft by the laborious habits of toil and agriculture. Such an agent is canal water; but in Bedoulee no canal water exists. A light assessment may make agriculture more profitable than cattle, but not sufficiently profitable to destroy old habits and make these men industrious. Hence it would, I think, be practically inoperative. Under this view, a temporary settlement would bring us no nearer raising the demand, while it would hinder benefits which permanency can alone fully guarantee.

"5. But admitting that, under the present settlement, cultivation will increase, is it desirable on that account to leave the settlement open? In Bedoulee there is no question of any Government outlay. No money has been expended on public works in Bedoulee for which Government might fairly demand a return; nor is the pergunnah peculiarly situated in any other respect. Hence the question simply is whether Bedoulee, assessed lightly, because inhabited by indolent and worthless castes, should, in the prospect of increased cultivation, be admitted at once to the advantages of a permanent settlement. The principle on which such a settlement is founded is that Government is willing to abandon a certain amount of direct land revenue, because by so doing it can the more encourage industry and enterprise, promote order, and increase the land-holder's interest in his land. Would the increase of revenue under a temporary settlement outway the indirect advantages of a permanent demand? It appears to me that, under the circumstances, and especially with regard to the great danger of discouraging these castes, the increased revenue cannot for very many years be much, and that the matter on financial grounds, scarcely admits of discussion. But would a permanent settlement among such a people bring the benefits which under ordinary circumstances are assumed to be peculiar to it? Not in the same degree. But it would have a *tendency* to do so; and I think that such a tendency is more precious than the small amount of enhanced revenue the Government could hope to obtain. But might not such a tendency co-exist with periodical moderate enhancements of demand? Under ordinary circumstances to some extent, but, among a people careless of comforts and averse to agriculture, with difficulty; while, viewed as a punitive measure, a temporary settlement would be little felt by the Goojurs, and would frustrate other ends, thus recoiling on the Government.

"6. Secondly, as regards the relative fairness of the demand. If the Bedoulee assessment is declared permanent, there is no doubt that the average on the Bedoulee land-holder, after eliminating all disturbing elements, will be far less than on his neighbour in the adjacent pergunnahs. But it has already been seen that there is no ground for supposing that a temporary settlement would reduce the inequality, and allowing that the inequality might, under a temporary settlement, be reduced, does this consideration outweigh all others? If among such a people it could be hoped that a temporary settlement equalizing the land tax, combined with the indirect advantages of a permanent settlement, could be secured, there could be no objection to a temporary settlement; but this being highly improbable, is the absolute equality of the incidence of the tax to be preferred to the chances of civilizing and reforming a thieving and blackguard community? As regards Government, I think certainly not, nor, on closer inspection, as regards the people. An honest and industrious man

paying Re. I an acfe may feel indignant at the rogue who only pays 10 annas ; but it is his interest rather to see the rogue paying 10 annas permanently and molesting no one, than to find him paying 13 annas acreage liable to enhancement, and retaining his predatory and unsettled habits. It is no doubt possible that he will pay lightly and be none the less a thief, but the light permanent payment, as has been already said, will have a tendency to reform him. Hence, though at first sight the incidence of the tax seems unfair, on closer inspection the interests of all parties will, I think, be found identical.

" 7. Both as regards the interests of Government and that of the community at large, then, it seems to me the Bedoulee settlement should be rendered permanent.

" 8. It must be remembered (though, as the consideration is scarcely material, it has not hitherto been urged) that there is a class of Syud and other proprietors in Bedoulee who deserve the greatest consideration. An assessment high on account of the cultivators, shortcomings has broken and in many cases ruined innocent landlords. These men have made large payments to Government, and have received no adequate profits. Now they are offered some chance of a fair return. Any increase in the demand arising from their efforts cannot be too strongly deprecated. As no other caste will come into the pergunnah, these land-holders can rarely work through other than Goojur or Rangur cultivators. The difficulties and expense attending any increase of cultivation in their villages are enormous, for men who will not work for themselves are little disposed to work for others. This, no doubt, would be special matter for the consideration of a future Settlement Officer ; but I mention it here as showing that the increase to Government revenue from a temporary settlement in this pergunnah is affected by various causes."

(True copy)

S. N. MARTIN,

Collector.

PERGUNNAH THANNAH BHOWUN.

PERGUNNAH Thannah Bhowun is bounded on the north by Gungoh and by Rampore (both pergunnahs of the Saharunpore District), on the south by Pergunnahs Shamlee and Bugra, on the east by Pergunnah Churthawul, and on the west by Pergunnah Jhinjhana. It covers 88* square miles. It has altered its limits since Mr. Thornton described it in the Saharunpore Settlement Report (paragraph 16), but the account there given of it is generally correct. Towards the west it is intersected by the Kirsunnee, a stream running here between high banks. Beyond the Kirsunnee lies the Eastern Jumna Canal. To the extreme west the soil is naturally good, but to the east of Kirsunnee the land is high, and there is a paucity of wells. In these parts and towards the south of the pergunnah the land is open, rather thinly inhabited, and not thickly cultivated. About the canal, mango groves are frequent, population abundant, cultivation universal. The chief crop grown in the pergunnah is wheat, occupying, as will be seen from Statement No. , 48 per cent. of the whole cultivated area. Rice is grown by a few villages, such as Yarpore, Kadurpore, Janeepore, and Umbeytah. The chief trees are, as usual, the keekur, sheeshum, and jamun. About the north-west, in the villages Ahmedpore, Khanpore, and one or two others, dhâk jungle is prevalent. Large tracts of " oosur " lie on either side of the canal at intervals on its whole course throughout the pergunnah. The population† (405 to the square mile) is chiefly Rajpoot and Jât; but there is a good sprinkling of Pathans and Sheikhs, descendants of former maâfeedars. The Rajpoot are a violent, quarrelsome set of

Description of pergunnah.

* 90·1 in Christian's Report on the Census, p. 110.

Caste of inhabitants.

† 555 in Christian's Census, p. 110.

Difference probably due to mutiny, and exodus of 1860-61.

See paragraphs 3 and 8.

men, bad subjects and bad neighbours. The Jâts, as usual, are industrious, frugal, and orderly,—troublesome only by reason of their love for small disputes and bickerings. The Pathans are of the family of Nujeeb-ood-dowla, the Minister of Shah Alum, and vicegerent of the Abdallee Ahmed Shah. Further than this one does not care to trace their origin. Their character has little in it to excite interest, or their career to reward curiosity. Profuse, rapacious, haughty, mean, intriguing, and indolent, they are worthy inheritors of the proverbial "Pathanee Mizaj."

2. There is but one large town in the pergunnah,—*viz.*, Julalabad, the headquarters of the Pathans. Thannah Bhowun, as will be presently mentioned, has been ruined by the disturbances; while Loharee, formerly a town, is now little more than a village, and Ghousgurrh, once the most important of all, and to be found in almost every map of India, is a heap of ruins, and inhabited by only a few Rors, who squat in an angle of the old walls. Julalabad is the seat of a considerable exchange, and has a market inferior only to the neighbouring town of Shamlee. The folly of the Pathans, who grasp at extortionate fees, has lessened the trade, but has not yet succeeded in driving it away. Thannah Bhowun has only a small market for agricultural produce. There is a similar market at Loharee, and a leather market at Gurhee Abdoola Khan. At Thannah Bhowun is a Police station. A fair road runs by Thannah Bhowun to Julalabad and Saharunpore from Meerut *viâ* Shamlee. Another road goes off to the east to Mozuffernugger, but it crosses the Hindun—in the rains a swollen torrent—by an unbridged ford. Another road goes *viâ* Julalabad to Teetron, and a new road to Jhinhâna in the south-west is in course of making. The chief traffic is on the Shamlee-Julalabad road. The sugar-cane of the pergunnah finds its way mostly by this road to Shamlee, and grain, pepper, salt, dyes, and leather go up this road to Julalabad.

3. The pergunnah is notorious in Mussulman history as the home of the infamous Gulam Khadir. Here his grandfather built "Ghousgurrh," within a few fields of the Pathan town of Julalabad, and the Sheikh city of Thannah Bhowun. It was the southern fortress of his jagheer of Saharunpore. In Zabita Khan's time (the son of Nujib-ood-dowla) the town was more than once overrun by the Mahratta hordes. A Mahratta *maâfeedar* still holds the village of Manukpore, hard by. After Gulam Khadir's death the town was rapidly emptied. One of Perron's deputies tried to rebuild it, but he was recalled to Delhi by the approach of Lord Lake. Since then Sikh horsemen have harried the country up to the deserted gateways, and nothing now remains but high mud walls, scattered bricks and exposed foundations, and the minarets and domes of a decaying mosque. The Government has recently given to a colony of Rors the zemindaree right to the enclosure within the walls. And so there was an end of the Pathan city. Similarly, but from different causes, the town of Thannah Bhowun is fast decaying. Its Kazee and his brother Sheikhs who owned it rebelled, as is well known, in 1857. A short struggle, a successful repulse of our troops, a cruel massacre in a neighbouring town, a second advance, and hasty flight and dispersion, summed up the history of their rebellion. Their town was mutilated and defaced, and their lands, for the most part revenue, free, were confiscated. Now Thannah Bhowun is a city of empty houses. A few Sheikhs prowl about their old mohulla. The Rajpoots, the original zemindars, still squat about the out-skirts, but there is scarcely a house in the Mussulman quarter which is not Government property. And so here, as elsewhere, the Mussulman is dying out. First Ghousgurrh, then Thannah Bhowun, and the Julalabad lands covered by a brotherhood of needy Pathans, keep with difficulty from the hammer.

4. A line of revenue, free villages, as will be seen from the map, runs across the pergunnah. The owners are Pathans, a Mahratta (Manukpore) Sheikhs and Beloches.

5. As to the settlement. Boundary disputes were few in this pergunnah, and those easily settled. The period of measurement, *Boundaries and measurements.* &c., has been detailed by the Collector. The assessment was on the following principles.

6. It has been stated in paragraph 1 that the pergunnah limits have considerably changed since Mr. Thornton made the Saharunpore settlement; hence the rates then formed were open to question. But, further, he had only one set of rates for the whole pergunnah, and the pergunnah is made up of two quite distinct classes of villages. My first business was to classify the villages. I divided them, as will be seen by the accompanying map, into two circles. The classification was general. The villages on and about the canal formed one class, in which the better kinds of produce were extensively grown, the soil was naturally fertile, and the population abundant. The villages on the east side of the Kirsunnee and immediately on its west bank were grouped as a much inferior class. These classes I formed from personal knowledge of the pergunnah, neither in this nor in any other step taking much counsel with officials.

Assessment.
Classification of villages.
Ascertainment of deduced revenue rates. The revenue rates had then to be fixed. In this pergunnah rent is paid (when it is paid at all, for the villages are chiefly Bhyachara) chiefly in kind. Some crops—such as sugarcane, cotton, maize, churree, and indigo—pay a money rent per beegah. The classification seems to be according to the expense attendant on the cultivation of the crops, the most expensive paying a money rent equal to about one fourth of the gross out-turn, the less

Difficulty of finding trustworthy money rates. expensive a rent in kind equal generally to two-fifths of the gross out-turn; but in good villages amounting to one-half and in indifferent villages falling as low as one-third. In some instances a general beegah rate on cultivation existed, irrespective of the kind of crop grown; but these instances were not sufficiently various to admit of induction. The variety of soils, the circumstances under which the rate was fixed, the facilities for irrigation, could not, I found, be so generalized as to enable me to apply any such rates, or average of such rates, with certainty. Thus, in Mouzahs Munhut and Yarpore, I found cultivators paying Rs. 5-4-0 per acre for very dissimilar lands, and in Mouzah Oosmanpore only Rs. 3-14-0 per acre for land of a quality superior to either of the above. Where a beegah rate is not customary, it is rarely an index to the capabilities of the land, nor can it be made the basis of calculations for the future. A biswahdar whose right of ownership has been sold, a body of biswahdars who under similar circumstances have been powerful enough to make terms with the purchaser,—in such cases a low beegah rate is often found. But, under Act X. of 1859, as there can be no certainty of the continuance of such a rate, so there is no ground for making it the basis of assessment; hence the only course is to frame a set of rates calculated on the basis of estimates of the actual produce.

7. After classifying the kinds of soil under the four heads* known in this district, the ratio occupied by each crop in each kind of soil was ascertained from the measurement papers. The pergunnah in 1860-61 was in an abnormal state. The canal villages were growing wheat in unusually large quantities. In the other villages cultivation was nearly confined to the vicinity of the wells, but there, too, the better crops were being grown in unusual proportion, and the wells were being worked to an unusual amount. Hence I lowered the amount of two principal crops—wheat and maize—by one-fifth, and added the difference to bajra and churree. To this ratio thus obtained I applied, as far as money rents went, the average money rents of the last 10 years, and to the other crops a set of estimates founded chiefly on local enquiry. I went over several files of summary suits, but in the first place I could rarely ascertain whether the land in question was irrigated or unirrigated, and very frequently the estimates themselves were disputed by the parties,

* I.—*Meerum* (Manurel : cane, cotton, tobacco, vegetables, &c.).

II.—*Roslee* (Joar, churree, wheat, barley, vetches, &c.).

III.—*Dakur* (Rice, gram).

IV.—*Bhoor* (Churree, vetches, wheat, &c.).

Method adopted of calculation of rates for kind of soil.

and evidently excessive. The Kham Tehseel papers were of more assistance, as giving me a fair acre average out-turn for each kind of crop,—several villages in the Kheaooree Circle having been held kham. The result was not, however, satisfactory. This process, which answered very well in pergunnahs assessed the

Peculiar difficulties owing to abnormal cultivation in the famine year. following year, was injured in 1860-61 by the unusual state of the crops, and the undue abundance of the

more remunerative, especially wheat. It will be understood that cultivation was confined to irrigated lands, and on them principally to the better crops. Hence, although one-fifth had been reduced from wheat and maize, the average of the better crops was evidently in excess. The nikassees could not help me, for, although they showed the ratio of crops in ordinary years, they did not show them classified by soils. Unwilling to adopt rates which seemed too high (the averages of crops on each soil and rates formed by me in Circle Aurungabad, besides the rates actually adopted, are

Rates finally adopted. given at the foot of this report), I turned to Mr.

Thornton's Mozuffernugger rates for the neighbouring Circles of Bhynswal and Shamlee; and, after applying them to several villages, and comparing their results with the other processes subsequently detailed, I felt so satisfied with them as to adopt them, only reducing them to half assets. These rates were applied to the total of each kind of soil for each circle,—i. e., the Bhynswal to the Aurungabad Circle, and the Shamlee to the Kheaooree Circle,—giving respectively a circle demand of Rs. 22,257 and Rs. 33,938. This, again, and the cultivated area of the circles were divided into each other, and gave an average rate by means of which I re-distributed the circle jummas over the individual villages. The soil-rates applied to each village were then compared with this jumma. An abstract of the nikassees was also made for five years of the last settlement. The rate given by the total of the area cultivated by crops paying in kind, and the value of these crops as inserted in the nikassees, was applied to the area cultivated with such crops in the khusrah,—the area cultivated by crops paying money rents being multiplied by those rents, and the two results added together. This estimate was always low. The Putwarees, I believe, in this district register accurately the kinds of crops grown; but the amount grown is quite untrustworthy. Similarly, the out-turn of five years according to the appraisalment table in Statement 1, Appendix to Mr. Thornton's Mozuffernugger Report, was substituted for the amount grown as registered in the nikassees, and the rate thus obtained applied as the rate obtained from the nikassees had been applied. This, in average villages, was very useful, giving a demand below which, without special reasons, I never suffered myself to fall, and often affording an index to the real capabilities of the village. In almost every village in the Kheaooree Circle there was a good deal of land thrown out of cultivation by the drought of 1860-61, and by the disturbances of 1857-58. As a rule, I took into calculation, at the average cultivated rate of the circle, all land in excess of the proportion borne by the circle, culturable and recently abandoned of the last settlement. The nikassees gave me little aid, for they did not distinguish accurately between "culturable" and "recently abandoned." So, too, in applying the soil-rates to each village, the average amount of manured land *per well* in the circle was preserved for each village within it. This relieved the industrious, and took cognizance of the lazy. It will be seen from the Miscellaneous Remarks that when I considered it necessary I have departed to a large extent from the results of the rates, which were only *average*; but they have been the basis of my assessments.

8. The former jumma of the pergunnah was Rs. 56,244; the jumma of the

Comparative demand of deduced revenue rates, and as finally fixed.

* The mortgagee's lien on the confiscated masáfee rights of Sohunjnee Oomurpoor has since been removed. Rs. 807 has thus been added to the annual pergunnah jumma.

pergunnah at deduced revenue rates is Rs. 55,664; I fixed it at Rs. 55,802.* The former demand had been fair; but in 1860 the pergunnah was much reduced—the drought and disturbances had caused a great exodus of cultivators: hence my demand was perhaps a little below what the pergunnah is equal to.

But if I had put on a full demand, few villages could have paid it for the first four or

five years, and the effect would probably have been to hinder the return of absentees, if not to promote the exodus.

9. It seems unnecessary to give further details regarding villages here, for they will be found in the Miscellaneous Remarks. I have here shown the principles on which my assessments were made; the details of each particular village will be found in those remarks.

10. All the villages accepted their jummas without trouble. The confiscated patches are held in Kham Tehseel till sanction for sale is received, applications having been duly submitted.

11. The decrease from the former jumma must be entirely attributed to the half-asset principle, for I may here mention that that principle is in no way balanced by any increase of prices. The following tables, for the accuracy of which I can vouch, show the average prices of the last twenty years in the markets of Shamlee and Kyranah, the principal markets in the neighbourhood. They are, it must be observed, harvest prices.

From ...	1841—45.	1855—59.	1841—50.	1850—59.
<i>Shamlee.</i>	Mds. Seers.	Mds. Seers.	Mds. Seers.	Mds. Seers.
Wheat ...	0 32 per Re.	0 36 per Re.	0 31 per Re.	0 36 per Re.
Barley ...	1 3 "	1 16 "	1 4 "	1 13 "
Gram ...	0 33 "	1 7 "	0 34 "	1 4 "
Mussoor ...	0 35 "	1 0 "	0 34 "	0 39 "
Sirson ...	0 21 "	0 24 "	0 21 "	0 24 "
Rice ...	1 1 "	1 13 "	1 0 "	1 8 "
Chahora ...	0 35 "	0 38 "	0 35 "	0 37 "
Moong ...	0 28 "	0 37 "	0 28 "	0 36 "
Oorud ...	0 27 "	0 37 "	0 28 "	0 24 "
Mote ...	0 33 "	1 5 "	0 33 "	1 2 "
Bajra ...	0 35 "	1 3 "	0 35 "	1 2 "
Joar ...	0 36 "	1 3 "	0 36 "	1 3 "
<i>Kyranah.</i>				
Wheat ...	0 31 per Re.	0 35 per Re.	0 31 per Re.	0 34 per Re.
Barley ...	1 3 "	1 14 "	1 2 "	1 11 "
Gram ...	0 34 "	1 8 "	0 33 "	1 4 "
Mussoor ...	0 33 "	1 7 "	0 33 "	1 3 "
Sirson ...	0 21 "	0 23 "	0 20 "	0 24 "
Rice ...	0 38 "	1 1 "	0 37 "	1 0 "
Chahora ...	0 36 "	1 0 "	0 36 "	0 39 "
Moong ...	0 30 "	0 35 "	0 29 "	0 30 "
Oorud ...	0 30 "	0 36 "	0 29 "	0 30 "
Mote ...	0 34 "	0 39 "	0 33 "	0 39 "
Bajra ...	0 34 "	0 37 "	0 33 "	0 36 "
Joar ...	0 35 "	0 39 "	0 35 "	0 38 "
Mukkee ...	0 37 "	0 39 "	0 36 "	0 39 "

12. The decrease of prices cannot be attributed to the increase of cultivation, for in Thannah Bhowun, as in other pergunnahs, it will be seen that cultivation has not increased; but the amount of wheat and the other better classes of cereals grown must have been greatly increased by the extended area of canal action; and this may have something to do with the question. And, meanwhile, the great cost of carriage has certainly prevented the mahajuns from sending corn to markets where the ordinary price was higher than that prevailing here.* They could only send it short distances, and within short distances the price was generally much the same as here, for since the last settlement no access to fresh and important markets has been opened up: hence the increased amount of corn has been sold at a lower price in the original market. With an extension of railways, however, the prices of cereals will in this district certainly rise. Here there has hitherto been a glut of

* At the foot of this report will be found a table of cost of carriage, given me by Lalla Oodeyram, the well-known Soukar of this district.

produce, and the same system of carriage which fills other markets will diminish the abundance of this. If a permanent settlement is sanctioned, without any stipulation as to a periodical reconsideration of the value of money, the jummas of many districts will before long bear an altogether inadequate ratio to the value of the produce.

13. The settlement has, I think, been a lenient one. The lesson of 1860-61 was not lost on me. An example of the utter inability, as a rule, of the village communities in an indifferently-irrigated country to meet a bad year from the profits of good years, or from their credit with their bankers, had weight with me when fixing the demand for the country between the Hindun and Kirsunnee. On the canal the chief danger is over-cropping. The land is rarely allowed to rest. Cotton, for example, is sown in a field in the autumn, and wheat follows in the next crop; churree will be sown the following autumn, and succeeded by wheat; then again cotton as before; and so on. The only crop for which land is rested is sugar-cane, and for that not more than one season. In ordinary villages this system is kept within bounds, not more than 10 per cent. of the cultivated area being "do-fuslee," as it is called—that is, grown with a crop both seasons; but on the canals it is carried to excess, and the cane is very much deteriorated.

Every village personally inspected. 14. It may be here mentioned that I have visited every village in the pergunnah,—many of them over and over again.

15. There was little trouble in fixing the rent-rolls after assessment. The estates are chiefly owned by village communities, and rents, when paid, are either in money or kind, as has been already remarked, according to the nature of the crop; and these rents prevail so widely that there is no difficulty in fixing on the proportion or sum which shall be paid to the landlord. Imperfect divisions have been carried out in a few instances, and the division of the confiscated lands in Kusbeh Thannah Bhowun has been separately reported on.

Number of Lumberdars. 16. There were 158 Lumberdars at the time of re-settlement; there are now 126.

17. From Statement No. it will be seen that, even including the recently-abandoned land, the cultivated area has not increased since 1840. This is unsatisfactory. There are probably three causes,—the *first*, that much of the so-called culturable land is rain land of a nature which at prices would not repay cultivation (this has been frequently mentioned in the Miscellaneous Remarks of the No. II. Statements; *secondly*, such of it as might repay cultivation would only do so after wells had been dug, and the land-holders (whether so-called bunya capitalists, or Mussulmans, or Rajpoots) were too unenterprising to make an outlay of this nature on any large scale; and, *thirdly*, their unwillingness was increased by the short period of settlement, for, after the first ten years, they must have felt that before such an outlay of capital could be repaid by a fair rate of interest, the Settlement Officer would be upon them. In so short a settlement, every increasing year lessens the willingness to spend capital on the soil.

18. The increase in the number of tenants having right of occupancy is remarkable—513 to 170. Their average holdings, however, are smaller, and 3 acres is certainly not more than one man can cultivate. There seems little fear of their sub-letting their holdings. The cultivating proprietors have diminished very much, and probably some of them are now to be found among the tenants having a right of occupancy. The diminution of their holdings is chiefly to be attributed to the confiscation in 1857 of two or three large Bhyachara villages, and the flight or conviction of the zemindars; for the Transfer Statement shows that ordinary transfers will not

account for it. These statements are the result of a careful analysis of the old and new records, and may be read with more satisfaction than usually attaches to statistics prepared by native officials.

19. The recorded transfers do not amount to much more than 1-7th of the whole area, but there is no doubt that petty transfers, where mutation of registry has not taken place, are frequently unrecorded. It will be seen that of the recorded transfers (excluding those in which mahajuns were transferrers) rather more than half have been into the hands of mahajuns, or about 1-14th of the whole area. This is little enough. The jumma in this pergunnah previous to the disturbances and drought was a very fair one. The private transfers are at about seven years' jumma, and the transfers by Court at about six years'.

20. The population has been estimated at 405 per square mile. This estimate, it will be remembered, was not taken in one day, but extended over four months; and though, from personal testings, I believe it is accurate in itself, it can, as a census, only be approximate.

21. The Putwarees' circles were re-arranged subsequent to assessment. There are now 32 circles and 32 Putwarees. The villages lie contiguous, nor does any circle embrace villages lying in different pergunnahs. The highest pay is Rs. 151, the lowest Rs. 169.

22. Those revenue-free villages in which there were two parties—maafeedars and zemindars—have had a demand duly assessed. Provision for cesses in revenue-free villages. In villages where the maafeedars owned also the zemindaree right, a jummaundee has been calculated at the average cultivated rate of the circle in which they stand, for the calculation of cesses. The maafeedars have agreed to pay such cesses pending settlement, or till further orders.

23. The pergunnah, prosperous hitherto, will, I hope, continue to do well. The jumma has not been increased, but readjusted.

24. The following villages, in which all or part of the maafee right has lapsed by rebellion, have been added to the towzee, and included in the pergunnah jumma,—viz., Hirunwarrah, Yarpoor, Chuk Kutubghur, Chundena Mall, Mulanpoor, Loharee, Sohunjnee Umarpoor. Besides these, in this, as in other pergunnahs, are patches of confiscated lands—small plots only.

25. It will be seen from the statement regarding increase attributable to canal that the increase of demand in this pergunnah attributable to that cause is stated at Rs. 10,295. The method in which this sum has been calculated is explained in the remarks of the statement. But the amount to be taken off from the jumma owing to canal action has not been entered either in this or in any other statement. There were simply no data on which I could go. The villages bordering the canal are very much affected by the efflorescence locally known as *reh*, which is destructive to all vegetation. The barren land of those villages at the last settlement was 535 acres, as in the margin: it is now 2,407. This increase is chiefly attributable to the increase of this land. Major Brownlow is unwilling to allow that the canal is the cause of increase in this land; but *reh* in these parts of the district is only to be found in the neighbourhood of the Jumna Canal and the Jumna River, and there is no other cause to which, as far as I have heard, it can be attributed.

	Acres.	Acres.
Yarpoor	364	389
Khera Gudaee,	43	376
Khyal Shikarpoor,	20	308
Bunhera	33	426
Nonjul	75	908
	535	2,407

The greater part of the 2,407 was at the last settlement classed as culturable; and in the case of so large an area one is bound to suppose it properly classed.

26. The total canal irrigation at the last settlement, as shown in the canal records, was 3,590 acres, and in 1859-60 was 6,000 acres; the former against 20 villages, the latter against 25.

Rates on cultivated and malgoozaree area of the new jummas.

27. The rates of the new settlement on the cultivated and culturable area are as follows:—

			<i>Malgoozaree rate.</i>	<i>Cultivated rate.</i>
Kheaooree Circle	...	...	1 4 11	1 13 7
Aurangabad Circle	...	...	1 14 0½	2 9 1½
Pergunnah	...	...	1 7 2	2 0 7½
Pergunnah Gungoh, Zillah Saharunpore,			1 3 7	1 11 5
Ditto Rampore, ditto	...	...	1 7 8½	1 12 2½

28. The rates of the new demand on each caste in each circle are subjoined. The incidence of rates on each caste in each circle. The incidence of the settlement on each caste will thus, it is hoped, be clearly seen, as being struck for each circle; the causes which make the difference are narrowed chiefly to that of caste. The number of villages from which the average rate has been struck is also given, to enable the Board to judge of the fairness of any generalization.

<i>I.—Circle Kheaooree.</i>				<i>II.—Circle Aurangabad.</i>			
		M. R.	C. R.			M. R.	C. R.
* The comparison here should be between Rajpoots (lazy) and Rors, Sanees (industrious). The Jât rates are confined to a single village, and that (Abdoolapore) an exceptional one.	Rajpoots, 16 villages, }	1 4 5½	1 13 3½	Rajpoots, 5 villages, }	1 12 1	2 6 5½	
	*Rors, 5 do., 1	5 5	1 13 3½	Rors, 1 do., 1	2 8	2 11 4½	
	Jâts, 1 do., 1	7 2	2 13 11½	Jâts, 8 do., 2	0 10½	2 12 3½	
	Sanees, 2 do., 1	12 0½	1 14 2	Kumhars, 1 do., 2	12 11½	2 14 11½	

29. Balances have been separately reported upon. Were it not for the effects of the Mutiny, there would be very few balances, and such as there are, are chiefly those which have accrued under direct Government management of confiscated lands.

30. The accompanying maps, which have been drawn up by my own hands from comparison with the shujrahs of each village, show accurately the circles of assessment, the main roads, the direction of village roads and rajbuhars, and against each village is noted down the malgoozaree and cultivated rate of the new assessments. A statistical summary is added in the margin. These maps, it is hoped, will bring the results of the assessment together, and show the general features of the new settlement.

MOZUFFERNUGGER :
Dated the 8th January, 1864. }

A. COLVIN,
Settlement Officer.

(See paragraph 12.)

		As.	P.	
From Mozuffernugger to Meerut,	33 miles,	3	3	per Meerut pukka maund.
" Shamlee	24 "	2	0	" "
" Jelalabad	21 "	1	9	" "
" Deobund	16 "	1	6	" "
" Saharunpore	36 "	3	6	" "
" Hurdwar	51 "	5	0	" "
" Roorkee	32 "	3	3	" "
" Bijnour	33 "	3	3	" "

Gharree hire within a radius of 33 miles is Rs. 4, and a gharree load 20 maunds pukka.
(See paragraph 7.)

<i>Meesun irrigated.</i>		<i>Acres.</i>	
Wheat, 19	maunds per acre,	20½	} Parts of 100, the whole area being reduced to 100.
Gram, 12	" "	1½	
Barley, 17	" "	0½	
Dhan, 16	" "	0½	
Joar, 18	" "	3	
Oorud, 20	" "	0½	

The rest of the 100 (acres) meesun irrigated are subtee crops paying a money rent, to which it was not necessary to apply average rates. The rate formed from the money value of these averages and the result of the subtee rates was Ra. 3-7-9.

<i>Roslee irrigated.</i>				<i>Roslee unirrigated.</i>			
Wheat,	16 maunds per acre,	43	acres.	Wheat,	10 maunds per acre,	74½	acres.
Gram,	12 " "	3	"	Joar,	10 " "	0½	"
Barley,	14 " "	0½	"	Oorud,	} 12 " "	5	"
Musoor,	14 " "	0½	"	Mote,			
Chhora,	13 " "	12½	"	The rest subtee rate = 1-14-7.			
Dhan,	12 " "	1½	"				
Joar,	15 " "	6½	"				
Oorud, Mote,	17 " "	3	"				

The rest subtee rate = 3-1-1½.

<i>Dakur irrigated.</i>				<i>Dakur unirrigated.</i>			
Wheat,	12 maunds per acre,	13½	acres.	Wheat,	7 maunds per acre,	58½	acres.
Gram,	14 " "	6	"	Gram,	9 " "	4	"
Barley,	14 " "	1½	"	Chhora,	11 " "	37½	"
Musoor,	12 " "	0½	"	Rate = 2-10-7.			
Chhora,	18 " "	67½	"				
Dhan,	20 " "	3½	"				
Joar,	12 " "	0½	"				
Oorud,	14 " "	0½	"				

Bhoor irrigated.

Wheat,	5 maunds per acre,	45	acres.
Joar,	4 " "	6	"
Oorud, Mote, 7	" "	18½	"

Rest subtee rate = 1-5-1½.

	M. I.	M. U.	R. I.	R. U.	D. I.	D. U.	B. I.	B. U.
Rates actually adopted ... }	4 11 8	1 10 1½	1 14 8½	1 4 10½	1 15 1	1 13 9½	1 8 10	1 3 4
Rates as above ...	3 7 9	...	3 1 1½	1 14 7	1 8 9	2 10 7	1 5 1½	...

Rates adopted in the Kheasree Circle.

M. I.	M. U.	R. I.	R. U.	D. I.	D. U.	B. I.	B. U.
2 11 1½	2 5 3½	1 12 1	1 4 0½	1 7 3	1 1 3½	0 12 2½	0 11 6

PERGUNNAH JANSUTH.

THIS pergunnah was formerly known by the name of "Jowlee," but was afterwards more properly named after its principal and most centrally situated town, Jansuth. At the re-casting of the pergunnah system in 1854-55 it was thus re-constituted :—

From Pergunnah	Jowlee,	Zillah Mozuffernugger,	33 Estates.
"	"	Bhooma	" " 4 "
"	"	Sumbulhera	" " 2 "
"	"	Mozuffernugger	" " 3 "
"	"	Bhookerheree	" " 7 "
"	"	Khatowli	" " 4 "
"	"	Poor Chupar	" " 3 "
"	"	Hustinapoor,	" Meerut, 6 "
"	"	"	" Saharunpore, 1 "

2. The Northern or Jowlee Circle is, with rare intermissions, one vast sandy tract. The jansuth Circle is generally good, but is traversed by a range of low sand hills from the Jowlee plain, which, bifurcating to the south-west of the town of Jansuth, throws out branches

in two directions—due south and south-west. With the exception of the land actually occupied by these ridges, the soil is generally good. In the southern corner, where canal water has not as yet penetrated, kutchha wells can be constructed.

The central and northern portions are pretty well irrigated, but on the whole the pergunnah has not, perhaps, derived so much benefit from canal irrigation as some other parts of the district. Even at the last settlement, 13 per cent. of the cultivated area was irrigated from wells, and now the whole percentage of irrigation is but 38 from all sources.

Against this increase must be set off the damage done by the flooding of the Nagun by the escape water of the Pulree Rajbuha. A rain torrent has thus been converted into a regular stream, liable to rise suddenly and destroy the crops on either bank. The leakage from the same rajbuha, which runs high above the level of the country, has also rendered swampy and unfit for cultivation portions of the area of Pulree and other villages.

3. The bulk of the pergunnah belongs to three of the principal remaining families of the Barhah Syuds. This race claim de-

Syuds.
They themselves derive this designation from the word "Baher," saying that under the Khiljye and Turcoman dynasties they lived outside the "Oor doo," or camp tenanted by the rest of the king's retainers. Sir Henry Elliott thinks this derivation vitiated by the etymology.

scend from the Ben-i-Fatima, or blood descendants of the Prophet. Their immediate ancestor, Abdool-furah, settled in Puttiala, and the names of the four villages which, with his family, he occupied,—Teheenpoor, Chatrour, Jugner, and Kundlowal,—are still preserved in the designations of the four principal tribes of the "Barhah Saadat." The largest and most flourishing branch is now the Teheenpooree, which includes the families of Jansuth, Munsoorpoor, Khatowlee, and Mozuffernugger. The Chatrourees, though much fallen from their former dignity, are still to be found in Meeranpoor and its neighbourhood. Few of the Jugneres are left, and the Kundlewals have been almost extinct since 1760, when those who did not perish by famine and the sword of the Mahratta emigrated to Oudh. It is said that a few may still be found in Bedoulee.

Hossein Ali Khan, the present intelligent and enterprising head of the family, traces his descent to the famous Wuzer of Furokhseer, Abdoolah Khan, whose career is matter of history. It was while he, and his no less distinguished brother, Hossein Ali Khan, Ameer-ool-Oomra wielded the whole power of the empire, that the Syuds attained the wealth and position of which every village in these pergunnahs still shows the decaying monuments. Little now remains worthy of notice, except at Meeranpoor, where, among other objects of interest, is an enormous well, approached by a broad descending passage, down which many horsemen could once have ridden abreast, and watered their horses from the subterranean chambers, whose floors are built on a level with the water. The parapet and aboveground portions have been repaired, under the orders of Government, but the descent and the vaults are still choked by brushwood and fallen bricks. Here, too, are the marble tombs and cupolas erected in memory of the ancestors of the Chatrourees, but they are now dilapidated, as much by petty pilferings of the valuable stones with which they are inlaid, as by the attacks of an Indian climate.

The assassination of Hossein Ali Khan and the imprisonment of Abdoolah Khan were serious blows to the fortunes of the family, and from the day that the attempt of a third brother (Seif-ood-deen Khan) to establish a separate principality here was frustrated by a defeat at Bhyensee, followed up by the sacking of Jansuth, they have steadily declined, till in the disorders of the latter portion of the last century the greater part of them, too weak to make head against the oppressions of the Mahrattas, took refuge in Oudh. The establishment of British rule attracted them again to their houses, but their habits and traditions had ill fitted them to wage a contest against energy and progress; and the bunya, backed by the system and strength of our Government, has proved to them a more formidable enemy than the

Seikh or Mahratta, whose aggressions were supported by a mere feverish and fitful violence. The indolence and fatalism which are the characteristics of all Mussulmans are in their case stimulated by an unhealthy pride of descent, the offspring of which is not the energy that restores, but the recklessness that destroys. They cannot forget the days when every Syud son was on his birth enrolled as an officer or pensioner

A Syud cultivator, however poor, is of the State, and when the humblest among still mentioned as "Syud Saheb." them reaped the respect due to his triple claim of position, descent, and sanctity. Sir Henry Elliot's epigrammatic phrase, "the throwing away a birth-right to celebrate a wedding," has often found a literal application in the annals of this race. An honorable exception to this system of prodigal fatalism is Hossein Ali Khan of Jansuth, who, by exertion and judicious enterprize, has not only freed his property from debt, but is yearly increasing its extent.

4. His numerous estates are mostly let for money rents, and many other landlords have also adopted the same system. Though a valuable basis for assessment has thus been obtained, it has not been allowed to supersede the rent rates and the other rental estimates, but the constantly varying nature of the soil has prevented any attempt at fixing a sum-

Soil.	Rent rate.	Revenue rate.
Irrigated } Meesun,	4 1 6	2 0 9
Unirrigated } ditto,	3 6 11½	1 11 6
Irrigated } Roalee,	2 13 10½	1 6 11½
Unirrigated } ditto,	1 15 7½	0 15 10
Irrigated } Dakur,	2 10 5½	1 5 3
Unirrigated } ditto,	1 12 11½	0 14 6
Irrigated } Bhoor,	2 9 9½	1 4 10½
Unirrigated } ditto,	1 6 3	0 11 1½

2ND OR JOWLEE AREA.

Soil.	Rent rate.	Revenue rate.
Irrigated } Meesun,	3 8 3	1 12 1½
Unirrigated } ditto,	3 1 11½	1 8 11½
Irrigated } Roalee,	2 11 9	1 5 10½
Unirrigated } ditto,	1 15 9	0 15 10½
Irrigated } Dakur,	2 0 4½	1 0 2½
Unirrigated } ditto,	1 7 1½	0 11 6½
Irrigated } Bhoor,	2 7 4½	1 3 8½
Unirrigated } ditto,	2 3 8½	1 1 10

mary rate for universal application. In the absence of this useful test, the utmost care has been taken to compare the rates of the revised demands by the usual method of filling them in in one skeleton map. The discrepancies thus observed have in every case been subjected to rigid and repeated scrutiny. Where money rents were found to exist, it was often only necessary to consider how far they varied from what would, under ordinary circumstances, be fairly levied in estates of a similar class; and whether the causes of variance were comparatively fixed or temporary. Under the former head would come inferior soil, inaccessibility to irrigation, and, in so far as the value of the estate had been materially impaired by their operation over a course of years, the poverty of the landlord, and the shortcomings of the cultivators. The latter head would include, among others, the case of leases fixed before the introduction of canal irrigation, or granted on favorable terms to clansmen of the landlord, or to new cultivators (allowance being made in this last instance for capital sunk in their location), or obtained at similarly reduced rates by custom and combination of the cultivating body. Even where collections were still in grain, the same process could be applied to data furnished by analogy, and I was also assisted by the rent-rolls of those of Hossein Ali Khan's estates in which deficiency of numbers or means in the cultivators necessitated the retention of this system.

Full attention was as usual paid to the returns* of transfers and the financial history. The former assessments were, however, in general, fair, and the Government demand had been paid with ease in 48 out of 63 estates. In the whole pergunnah, I did not find more than two or three cases of material over-assessment, and in these the means of the owners had enabled them to bear the burthen without breaking down.

* The transferred property was 20 per cent. of the area; of this, three-fifths belonged to Syuds in whose case transfers need no comment.

The demand has been raised from Rs. 56,152-7-7 to Rs. 58,416.

C. GRANT,
Assistant, Settlement Department.

PERGUNNAH KHATOWLEE.

Constitution of pergunnah. THE Khatowlee Pergunnah was thus re-
arranged in 1855 :—

Former Khatowlee	Pergunnah	80	Estates.
„ Mozuffernugger	„	2	„
„ Poor Chupar	„	1	„
„ Bhookerheree	„	1	„
„ Deobund, Zillah Saharunpore	1	„
„ Hustinapore, „ Meerut	3	„

—
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2. The central body of this pergunnah, possessing every advantage of soil, irrigation, and population, is far superior to any other part of the Jansuth Tehseel. The land is level and fertile; numerous and flourishing villages, embedded in mangoe groves, attest the prosperity of the Jât and Ruwa cultivators; and rajbuhas running parallel to, and on either side of, the canal distribute water in every direction.

This fine tract was once in its entirety the heritage of the Munsoorpoor and Khatowlee family of Syuds. The former branch still retain a great portion of their rights, and their present representative, Abdool Ali, is in moderately good circumstances: but the latter are becoming more and more involved every year. An old instance of their recklessness may be mentioned here. Some 30 or 40 years ago they had an agent to whom was entrusted the whole management of their estates. Requiring money, as they say, for the expenses of his son's wedding, he embezzled the whole proceeds of a season. To meet the Government revenue, they mortgaged 16 villages to a mahajun for Rs. 17,000: the fortunate mortgagee at once sub-mortgaged his acquisition for Rs. 28,000 to the Nawab of Kurnaul, who is now the principal land-owner in the pergunnah.

Here was a loss at one blow of Rs. 30,000, which might have been almost entirely obviated.

To the west, the pergunnah is bounded by the Kalee Nuddee, which, swelled by the escape water of the canal, has of late years occasioned much damage to the lowlands lying on its bank. The approach to this khadir is marked by a range of low sand hills running in a due north and south direction through the whole of the estates on this side. To the south, the river takes a westerly direction, and the pergunnah thus widens out. All this portion of it is poor, sandy, and little irrigated. It forms part of a “choubeesee” of Rajpoot villages, which extends into the Meerut District, and whose head is Chowdree Bijah Singh of Chundseena.

To the east there is no definite boundary, such as a river, but here also the line of demarcation takes a westerly direction towards the south of the pergunnah. The tract thus included is principally inhabited by Puthans, Rangurs, and Goojurs; and though the soil, except in the westernmost estates, is of fair quality, want of irrigation and means prevent the cultivators from doing it justice. Here, too, the opening of the canal has been more prejudicial than advantageous, as, though the irrigation channels are too far to be of any service, much damage has been done by a rain torrent, Rhowa, as the Nagun, which has been swelled into the dimensions of a river by the escape water of the canal.

3. The rent rates in this pergunnah were found, on comparison with other estimates and the jummas hitherto paid, to be too low; they were therefore tested by a "kun-

ASSESSMENT.		
Soil.	Rent rate.	Revenue rate.
Irrigated Meesun,	5 0 7½	2 8 3½
Unirrigated ditto,	3 5 3	1 10 7½
Irrigated Roaler,	3 8 4	1 12 2
Unirrigated ditto,	2 3 6½	1 1 9
Irrigated Dakur,	2 4 10	1 2 5
Unirrigated ditto,	1 14 0½	0 15 0½
Irrigated Bhoor,	2 14 6	1 7 3
Unirrigated ditto,	1 6 8½	0 11 4

koot" made by the Tehseeldar and Canoongoe, and by the actual sub-leases in estates. The result showed that, to correspond with average assets, they should be increased about 18 per cent., except in "bhoor," or sandy soil. A summary rate was easily deduced from the numerous and various money leases actually existing in the pergunnah. The method of its computation is shown in Appendix A. The other rental estimates were also compared, and where any doubt remained, either as to actual assets,

or as to the proportion of them which might fairly be taxed, the money rates prevailing in neighbouring estates generally furnished a clue to the calculation of a suitable rental. Reductions have been generally needed in the ill-cultivated and poorly-stocked estates to the south-east, where the jummas had been fixed much with regard to culturable land. Had the improvident Puthan and Rangur owners brought to their task industry and capital, instead of debt and listlessness, these assessments would no doubt have been found suitable; but, under the actual circumstances, they have only led to transfers and deterioration. Relief was also needed in some of the estates on the river bank which had been assessed beyond their capabilities. In the greater part of the pergunnah, however, the collections have been easy.

Canal irrigation has not added to the rentals as much as might have been imagined. The inferior parts of the pergunnah have not yet been benefited by it. In the central tract, one-third was formerly irrigated by wells, while now canal water is not available in more than one-half, and the rents had been fixed on too high a scale to be capable of much increase; the result has been an increase on the former demand of Rs. 432-2-0.

MEERUT :
Dated the 9th November, 1863. }

C. GRANT,
Assistant, Settlement Dept.

PERGUNNAH BHOOMA SUMBULHERA.

THE bulk of this pergunnah was united to the Mozuffernugger District in 1842. At the re-arrangement of the pergunnah system in 1855 it was thus re-constructed :—

From Pergunnah Bhookerheree, Zillah Mozuffernugger, 14 Estates.

"	"	Jowlee,	"	"	2	"
"	"	Khotowlee,	"	"	4	"
"	"	Bhooma,	"	"	30	"
"	"	Sumbulhera,	"	"	11	"
"	"	Hustinapoor,	"	Meerut,	5	"
"	"	"	"	Bijnour,	10	"
Total,					76	

In 1859, a change of course of the Ganges added two more estates from Zillah Bijnour; one has since been swept away by the river, and one has been added to the list by the drying up of the swamp; and an estate which formerly consisted of five mehals has been divided,—thus increasing the total by 4.

The pergunnah therefore now consists of 82 estates.

2. The "bangur," or upland portion, is perhaps the worst continuous tract in the whole district ; it is intersected in every direction by seams of sand, which are of such frequent occurrence

Description of pergunnah. that the traveller from Khatowlee to Meeranpore can without difficulty tell when he enters the pergunnah by the condition of the road. With the exception of three or four

"Bangur."

fine Jât villages on the western boundary, there is no estate in it which does not include a large proportion of "bhoor." It is a commonly-expressed matter of wonder among the Syud land-holders that their ancestors should have chosen for their home so unfertile a corner of Hindostan, but they may console themselves with the reflection that the unenviable character of their possessions has probably retarded their inevitable displacement by richer men. The wealthy purchasers who compete to buy land in neighbouring pergunnahs have as yet shown no desire to extend their acquisitions in this direction, and the principal transferees of Syud proprietary rights are small money-lenders and traders, for the pergunnah contains no large capitalists of its own, although its principal town, Meeranpore, is a "munde," or entrepôt of trade, where the products of the hills and the Terraie and the rice of Rohilcund are exchanged for the salt of the Punjab and the grain of the Doab.

It is not, however, necessary to account for the settlement here of the Syuds by supposing any deterioration of soil or extension of sandy area of late years, for their destination was decided, in the first instance, more by necessity than by choice. When they came down from their temporary home in Puttiala they had not attained the power and distinction which afterwards fell to their lot under Bahadur Shah and Farookhseer, though even then their employments, actual or prospective, about the Imperial Court, rendered necessary a residence near Delhi. They had neither the strength nor the influence to eject the powerful tribes of Rajpoots, Jâts, Goojurs, and Mewathees who held the more convenient locations.

In their present decadence and poverty, they are mere burdens on the land, which, as has been seen, is ill qualified to support them. Nor are their shortcomings reduced in most cases by the industry and energy of the cultivators. In the southern portion, or old Bhooma Pergunnah, there is certainly a fair admixture of Jâts and Jhojhas ; but to the north, in what was the Sumbulhera Pergunnah, the tillers of the soil are nearly all of the Goojur class. Some of these communities have not yet recovered from the heavy fines imposed on them for their disorderly conduct during the disturbances, and none combine both the means and the inclination to cultivate properly. To these disadvantages may be added deficiency of irrigation, owing to the low level at which most of the irrigation channels are constructed, especially in the Sumbulhera or Northern Circle, and no more need be said to show the necessity for care in the revision of the assessment of so ill-endowed a tract. The Khadir, or

" Khadir."

alluvial tract which borders the right bank of the Ganges from the Saharunpore District, to Gurhmooktesur, in the Meerut District, is here from four to six miles broad. To the south, it has received considerable accessions from the Bijnour District by the change of course of the Ganges. At all times, the treacherous swamps and quicksands, the distance of villages from each other, the deficiency of a tenacious earth, and the expense of bricks for houses, the constant inroads of wild animals on the crops, and, above all, the discomforts and dangers of the rainy season, will stand in the way of the colonization and development of this tract. The only class who disregard these evils and inconveniences are the Bijnour Chohans, a debased branch of the Chohan Rajpoots, who are easily attracted by advances of money and favorable terms of rent, but as readily disappear on the first appearance of pressure from the landlord. They are even too free from that hereditary feeling of attachment to the soil which is such a millstone round the neck of the upland cultivator, and it is only their unsuitability to a more settled mode of life which retains them to this neighbourhood. Though

many of them are still to be found, their numbers were considerably diminished in the Mutiny, and the southern part of the Khadir is now much deserted. Three large villages—Jualpoor Neelah, Khera Mijahidpoor, and Rerewah—were, among others, destroyed and *looted* by turbulent bands of Goojurs. Though careless farming and an easily exhausted soil had always prevented anything like continuous cultivation in these estates, there was once a large though scattered area under the plough, and growing prosperity was teaching the villagers settled habits. But many of them were killed, others were driven away, and the destruction of the accumulated profits of years has broken the tie which might have induced the remainder to cling to their homesteads. The returns from the three estates had reached from Rs. 6,000 to 8,000 annually, while now they barely meet the jumma. Rerewah, which has been re-settled, will no doubt in time do well. Jalalpoor Neelah belongs to a wealthy bunya, whose zeal for improvements has hitherto been damped by the fear of their affecting the new assessment; but that difficulty has now been removed. For Khera Mijahidpoor, which belongs to an impoverished Syud family, there is little hope, except in spontaneous immigration; but it will be long before this tract regains its former prosperity. The extraordinary increase in the number of wild pigs and deer since the disarming of the country is an evil which even strong measures will not quickly counteract; and the zemindars complain, with what justice I cannot say, that the fertility of the soil has been impaired by the receding of the Ganges to the eastward. Formerly it used to flood the whole of this tract, and its waters, going off rapidly, left behind them a fertilizing deposit. It is, at least, certain that the rice produced on the river banks is finer than that grown farther in the interior.

At present, almost the only returns from these estates are derived from thatching grasses. Of these, “punnee,” a broad-bladed soft grass, is the best. It is also used for making brooms. The other kinds are “patel,” a fine needle-shaped grass, with a high stalk growing from the middle of each tuft, and the universally known “kans.” The tall central stalks of the “surkora,” called “bheends,” are used instead of bamboos for thatching huts: string for beds is also manufactured from them. But it is a universal complaint that of late years thatching grass has not been so much in request as formerly. The reason is by some stated to be the prevalence of the custom of tiling in the Cantonment of Meerut since the Mutiny, while others attribute the slack demand to the universal growth of high grasses along the canal banks. Be the cause what it may, the fact is, I believe, certain; and, except in lands lying on the river immediately opposite Bijnour, these grasses do not generally meet with a ready sale. A few rupees are also made by granting permission to dig saltpetre.

The central and northern portions of the Khadir escaped with comparative impunity from the forays of the Goojurs. The large estate of Hosseinpoor contained, among other villages, a Goojur settlement known as Secalee, the inhabitants of which attacked and partially *looted* Hosseinpoor. It is the principal place in this neighbourhood, and a halting-place for merchandize on the Meerut and Bijnour Road. The damage done by them has been repaired, and they have been rooted out, so that the loss incurred by the zemindar has not been without its compensating effect. The northernmost estates, always the best in this tract, have thoroughly regained their former prosperous position.

3. The principle of assessment has been the same as in the Bhoókerherce

Assessment.

1ST OR TISSAH CIRCLE.

Soil.	Rent rate.	Revenue rate.
Irrigated Meesun,	4 8 0.	2 4 0
Unirrigated do.,	4 2 0	2 1 0
Irrigated Roslee,	3 15 1	1 15 6½
Unirrigated do.,	2 13 9½	1 6 11
Irrigated Dakur,	2 2 8½	1 1 4½
Unirrigated do.,	1 15 9½	0 15 11
Irrigated Bhoor,	2 14 3½	1 7 0
Unirrigated do.,	1 8 1½	0 12 1

Pergunnah. Rent rates, founded on a classification of soils, have been checked by summary rates on irrigated and unirrigated land. The rent rates, as before, were adopted from Mr. Thornton's circle rates. With the exception of six villages which were treated as exceptionally good, the Bangur was considered as one circle. Though the northern portion is undoubtedly inferior to that of the

2ND OR JOWLEE CIRCLE.

Soil.	Rent rate.	Revenue rate.
Irrigated Meesun,	3 8 3	1 12 1½
Unirrigated ditto,	3 1 11½	1 8 11½
Irrigated Roslee,	2 11 9	1 5 10½
Unirrigated ditto,	1 15 9	0 15 10½
Irrigated Dakur,	2 0 4½	1 0 2½
Unirrigated ditto,	1 7 1½	0 11 6½
Irrigated Bhoor,	2 7 4½	1 3 8½
Unirrigated ditto,	2 3 8½	1 1 10
Bhooma ...	1 12 6	0 15 0
Sumbulhera,	1 8 0	0 12 0

KHADIR SOIL.

Soil.	Rent rate.	Revenue rate.
Irrigated Roslee,	2 14 11½	1 7 6
Unirrigated ditto,	2 5 6	1 2 9
Irrigated Dakur,	2 13 0	1 6 6
Unirrigated ditto,	1 13 11½	0 14 11½
Irrigated Bhoor,	2 2 6	1 1 3
Unirrigated ditto,	1 5 10½	0 10 11½

* In 19 estates collections were difficult, in 2 almost impossible.

southern, as well in soil as in the quality of the cultivators and facilities for irrigation, I did not think the difference sufficiently marked to make a separate classification necessary.

The summary rates are formed from those calculated for the former Meerut settlement by a deduction of $16\frac{2}{3}$ per cent. or $\frac{1}{4}$, as 100 represents the assets, and these are revenue, not rent, rates. The bulk of the pergunnah was formerly in that district, and Sir Henry Elliot based his assessment almost entirely on summary rates for irrigated and unirrigated land. The result of a collation of rent rates and summary rates was accepted, after a comparison with other rental estimates, as a fair theoretical assessment, to be tested and modified by the financial* history, and by such actual facts as could be ascertained by personal inspection and enquiry. Glaring cases of over-assessment could barely pass the ordeal of equalization of rates, but in one or two instances difficulties of collection and constant transfers pointed to a state of depression, in which average rates were too severe. Another aid to assessment was derived by applying the rates of the former jummas on cultivated and culturable land, modified to half assets to the new assessment areas.

From other sources it must be confessed that little was discovered. The Tehseeldar, who has since been pensioned, was too incompetent, and the Canoongoe too new, to supply a trustworthy estimate. Money rates, which are generally indicative of good soil and prosperity, were of rare occurrence, except in the few Jât villages mentioned above. But in the instances where average rates were found to work fairly, they were carefully noticed, and employed to check the estimated rentals; and some reliable rates of rent were obtained by enquiring from the principal cultivators of an estate belonging to the Rajah of Landhoura (a minor) the terms on which they would take the lease, each man paying per acre according to the quality of the land in his holding.

It must, however, be remembered that with sandy soil, scanty irrigation, and poor cultivators, proceeds depend so much on the season, and rentals vary so much from year to year, that closely accurate estimates of produce cannot successfully be attempted even by the owners or their agents themselves. One large proprietor, now a Tehseeldar in the Meerut District, furnished me with many valuable particulars regarding the circumstances and supposed incomes of land-owners, the means and characters of villagers, and the qualities of soil and produce of various estates; but, except in one or two instances, he wisely made no attempt to state exact rentals.

Much was therefore left to the judgment; but fortunately I had great confidence in both systems of rates, arrived at by two different processes, classified on different principles, and the result of independent calculations by two different officers, on different data. They agreed in most cases admirably, both with each other and with such information as I was able to obtain. A careful comparison of the rates of the new assessments with each other, and with the general rate of the circle and pergunnah, brought to notice remaining inequalities, and furnished occasion for a final scrutiny and correction.

The whole of the Khadir has been considered as one circle. The rent rates employed were formed by a fusion of those calculated for the two circles into which this tract was divided by Mr. Thornton; but, applying merely to cultivated land, these rates could not be regarded as affording sufficient grounds for assessment, as

the value of these vast culturable areas was but ill represented by a mere estimate of their scanty agricultural produce. A malgoozaree rate of five annas per acre, derived from the old jumma, and shown by experience of the Bhookerheree Pergunnah to be suitable, was therefore employed as an aid to assessment.

But the depressed condition of some of these estates made it necessary to limit the demand by what, in fact, could be realized under present circumstances. Even if a higher demand had been thought advisable, no farmer could have been expected to undertake it, as twelve years' profits could not compensate him for the expenditure of capital necessary to restore the land to a paying condition. The principle of progressively increasing demands has been disapproved by the higher Revenue authorities, and, therefore, in such instances the difficulty has been temporarily met by recording a condition that the assessment should be liable to revision, at the pleasure of Government and the Board. Should the present settlements be rendered permanent, these estates will, of course, be exempted from the privilege; and in the meantime perhaps the best course would be to declare their jummas liable to revision after ten years.

Even in the more prosperous estates of this Khadir, it was impossible to rely too much on future prospects of increased produce, depending almost altogether on the forbearance and industry of an unsettled race of cultivators, and the assessments were necessarily based much on actual condition.

The result of the whole has been a diminution in the Government demand of 1386, but the reductions in the ruined Khadir villages alone amounted to upwards of Rs. 2,000, and some strange cases of over-assessment in the Bangur involved considerable abatements, amounting in the four most marked instances to a total of Rs. 2,000. Besides these special cases, the general reduction to half assets lowered the whole system of rates by one-fourth, and the increase of cultivation was not sufficient to meet the loss thus incurred. Indeed, the newly-cultivated land of this pergunnah is, in almost every case, of the poorest description: what was either good in quality or near the villages has long since been brought under the plough, and the uncertain produce of outlying sandy fields adds more to the nominal than to the real value of these estates.

Deficiencies were to a considerable extent met and counteracted by canal irrigation, and had there been no special cause of deterioration the revenue would have maintained its equilibrium. The gain accruing from the canal to the jumma is estimated at Rs. 7,016 annually.

The engagements were readily entered into, and no coercive measures were found necessary.

MEERUT:
Dated the 9th November, 1863. }

C. GRANT,
Assistant, Settlement Dept.

BHOOKERHEREE PERGUNNAH.

ZILLAH MOZUFFERNUGGER.

THE Bhookerheree Pergunnah is bounded on the east by the Ganges, on the north, south, and west by the Goordhunpoor, Poor, and Mozuffernugger, Jansuth, and Bhooma Sumbulhera Pergunnahs respectively. It thus forms the central portion of the eastern division of the district. At the re-casting of the pergunnah system in 1842 it was thus formed:—

						<i>Estates.</i>
From the former Pergunnah of Bhookerheree, Zillah	Mozuffernugger,					40
" " "	Mozuffernugger,	"	"	...		5
" " "	Jowlee,	"	"	...		1
" " "	Poor Chupar,	"	"	...		2
	"	Meerut		...		1
	"	Bijnour		...		14
						—
						63

The constant tendency of the Ganges to recede eastward has since added five more estates from the Bijnour District,—two in 1849, three in 1859,—so that the pergunnah now consists of 70 estates, of which 53 are inhabited, 17 uninhabited.

2. Its physical features are remarkably varied. It may be said to consist of a

Physical description.

series of longitudinal belts, the first of which, beginning from the west, is a sandy tract culminating in a low range of sand hills. Here little is produced but the poorer crops, such as mote, jowar, bajra, &c.; and sugar-cane is almost unknown, except here and there upon the outskirts, where a little canal water reaches. Beyond this is a belt of good land running from north to south, and containing 27 estates. This is the best part of the pergunnah, and is equal to most portions of the district. The soil is generally rich, the cultivators good and numerous, and the Ganges Canal runs through the centre, irrigating freely all parts of it. For purposes of assessment, it constitutes the 1st Bangur or Upland circle. The 2nd Bangur Circle is a mixed tract, commencing with a strip of good land, and gradually deteriorating as it approaches the ravines which break the descent from the high land to the Khadir of the Ganges, of which it also includes a portion. Though there are so many varieties of soil in this circle, the estates composing it are so situated that all, or nearly all, contain their quota of each

1ST OR TISSAH CIRCLE.

Kind of soil.	Rent rate.	Revenue rate.
Irrigated Meezun,	4 8 0	2 4 0
Unirrigated ditto,	4 2 0	2 1 0
Irrigated Roalee,	3 15 1	1 15 6½
Unirrigated ditto,	2 13 9½	1 6 11
Irrigated Dakur,	2 2 8½	1 1 4½
Unirrigated ditto,	1 15 9½	0 15 11
Irrigated Bhoor,	2 14 3½	1 7 2½
Unirrigated ditto,	1 8 1½	0 12 1

2ND OR BHOOKERHEREE CIRCLE.

Kind of soil.	Rent rate.	Revenue rate.
Irrigated Meezun,	3 7 1½	1 11 6½
Unirrigated ditto,	3 0 10	1 8 5
Irrigated Roalee,	3 0 0½	1 8 0½
Unirrigated ditto,	2 2 11½	1 1 5½
Irrigated Dakur,	2 4 7½	1 2 4
Unirrigated ditto,	2 1 7½	1 0 9½
Irrigated Bhoor,	2 3 8½	1 1 10
Unirrigated ditto,	1 2 7½	0 9 3½

3RD OR JOWLEE CIRCLE.

Kind of soil.	Rent rate.	Revenue rate.
Irrigated Meezun,	3 8 3	1 12 1½
Unirrigated ditto,	3 1 11½	1 8 10½
Irrigated Roalee,	2 11 9	1 5 10½
Unirrigated ditto,	1 15 9	0 15 10½
Irrigated Dakur,	2 0 4½	1 0 2½
Unirrigated ditto,	1 7 1½	0 11 6½
Irrigated Bhoor,	2 7 4½	1 3 8½
Unirrigated ditto,	2 3 8½	1 1 10

sort, and they may therefore fairly be classed together. The tract is, on the whole, well irrigated and fairly populated. Even in the inhospitable ravines of the Ganges, villages may be found dotted at intervals of two or three miles; and though in these wild situations the shade of trees is almost unknown, pure water is scarce, and the children are exposed to constant risk from the incursions of wolves, the pastures of the Khadir are as accessible on the one side as the high arable table-land on the other, and the inhabitants can combine their more congenial occupation of herding cattle with the enforced task of agriculture. By numerous passes winding through the openings in these sandy hills is reached the Ganges Khadir. A far-stretching level tract, of a rich brown, variegated here and there with green patches and shining streams, the whole tipped by the broader line of the Ganges—such is the appearance which it wears in the cold season. Trees are scarce, and by this time of year the grass has lost its verdure and put on the brown tint which characterizes the whole tract. Only by rising crops or by reedy patches are spots of brighter color presented to the eye. The soil, though not so deep or strong as that of the high land, possesses the vigour of freshness, as new land is being brought under the plough every year; and the disproportionately small number of inhabitants, occasioned by the difficulty of inducing them to settle, allows of an almost annual change in the land selected for cultivation. The crops are therefore, on the whole, good, though the numerous risks to which they are exposed from inundation, the ravages of wild animals, and the unsettled habits of the cultivators, often render the returns from these estates a mere matter of speculation.

This tract has been classed as the Khadir Circle, but it does not include the whole					Khadir of the pergunnah. The Ganges approaches within a few hundred yards of the ravines about the centre of the pergunnah, and nearly opposite to the town of Bhookerheree, thus dividing the low land into two portions, which differ widely in character. The southern I have briefly described. The northern, surrounding the great Joghawalla Jheel, has formed, the subject of a special report, rendered necessary by the extension of swamp from the floods of the Solani River. It will be sufficient to say here that, in the uncertain condition of these estates, they cannot be classed with any circle, and their assessment must be regarded as temporary and exceptional.
KHADIR SOIL.					
Kind of soil.	Rent rate.		Revenue rate.		
Irrigated Meesun,	3	7 1½	1	11 6½	
Unirrigated ditto,	3	0 10	1	8 5	
Irrigated Roslee,	3	0 1½	1	8 0½	
Unirrigated ditto,	2	2 11½	1	1 5½	
Irrigated Dakur,	2	4 7½	1	2 4	
Unirrigated ditto,	1	11 4½	0	13 8½	
Irrigated Bhoor,	2	3 8½	1	1 10	
Unirrigated ditto,	1	3 1½	0	9 6½	

3. On the whole, then, it will be seen that the pergunnah is below the average of the district in natural quality. The first-class estates do not include more than 21,070 acres.

The second class, consisting largely of poor soil, is nearly equal in extent, and of the remainder even the best part is imperfectly cultivated, and lessened in value by many incidental drawbacks, while the worst is at present almost valueless. These natural disadvantages are, however, in some degree compensated for by ample means of irrigation and a large agricultural population. The number of inhabitants is computed at 33,271, or at the rate of 333 (principally Hindoos) per square mile—a very dense proportion, and yet I have reason to believe that it is under-rated, as the number of females recorded is considerably below that of males. Great part of the land, including 25 estates, is still in the hands of the Syuds, in spite of the numerous transfers of their property which have taken place during the last twenty years. The southern part of the pergunnah formerly formed portion of the tract known as “Bahrah Saadat,” over the whole of which all traces of alien ownership had been effaced by this powerful family. They are now fast being supplanted by mahajuns, who hold 14 whole estates, and large portions of 18 others. The rest are owned as follows :—

Jâts.	Sheikhs.	Tuggahs.	Beohras.
5	4	1	3

All these but the last are hereditary land-holders.

The cultivators are principally Jâts and Goojurs, and Chohans.

The estates are cultivated respectively by—

Jâts.	Goojur.	Jhojhas.	Bunjarahs.	Chohans.	Sainee.	Syud.	Mixed.
19	10	2	2	7	1	1	28

(including Brahmins, Aheers, Kahars, &c.)

The character of the classes to which the majority of the cultivators belong is in itself sufficient guarantee for the careful cultivation of the soil, on which the prosperity of the pergunnah almost entirely depends, as it is a purely agricultural tract. It contains no large towns or rich traders. The principal place, Bhookerheree, is a mere overgrown mud village, the trading population of which barely suffices to carry on the daily business of this and the surrounding agricultural communities. There are no important roads, except those from Mozuffernugger and Saharunpore to Bijnour, and even they are closed for traffic during great part of the rainy season.

4. Such is the present condition of the pergunnah. The destruction of the district records has rendered it impossible to procure accurate statistics regarding several points on which it would be interesting to compare the present with the past. But the opening

of the Ganges Canal alone is sufficient to produce a very marked increase in prosperity. At the last settlement there were only 189 acres of irrigation; now an ample supply of water is distributed over more than half of the cultivated area by means of eight irrigation channels, for the most part so well laid out and constructed that every estate in the pergunnah but one (Shadra Bangur) in the sand hills partakes of their fertilizing influence. So important an accession to the means of the cultivators could not have failed to accelerate the impulse everywhere observable to extend cultivation, and accordingly a comparison of former and present areas shows 47,884 acres of cultivation now, against 39,151 in 1840,—that is, an increase of about 22 per cent. in 22 years, or at the rate of 1 per cent. per annum. It is also probable that the quality of the cultivation has improved, as well as the quantity, for Mr. Thornton's tables show that the average of the manured land in the district in 1840-41 was but 16½ per cent., and it may be presumed that the proportion in this pergunnah, which is below the average, was less. The present recorded percentage is, however, 22; so that the advance must be considerable.

Another sign of the increasing value of the land, and therefore of the prosperity of the classes connected with it, may be found in the steady advance of rents. Mr. Thornton records that the average rates for "zubtee," or money-paying crops, were then per acre—

			Rs.	As.	P.
Sugar-cane	...	...	14	7	0
Cotton	...	...	6	6	5
Churree	...	...	2	6	0

They are now in the Bangur—

Sugar-cane, from Rs.	10	8	6	to	20	11	9
Cotton, „	4	7	0	to	8	4	3
Churree, „	2	0	3	to	4	9	0

A marked advance in rents would not naturally lead to the inference that the price of the produce from which they were derived had increased in the same ratio. The known progress of the country and common report undoubtedly point to a general rise in prices, but my enquiries lead me to think that the charge has been very gradual, and, as regards most agricultural produce, inappreciable during the last twenty years. There are no doubt still many living who can remember when both agricultural and skilled labor were available at little more than half their present rates, and the price of some descriptions of produce in universal demand have risen rapidly and noticeably; but a comparison made in 8 pergunnahs of the harvest prices of the principal staples for the last ten years, and the twenty years immediately preceding the former settlement, shows little or no difference in the rates of the two periods. A summary is subjoined, and the details will be found in Appendix A.

The produce which could have been purchased, according to price current left by Mr. Thornton, for Rs. 100, now cost—

					Rs.	As.	P.
Tehseel Jansuth.	In Pergunnah Bhookerheree,	94	11	0, decrease per cent.,	5	5	0
	„ Bhooma Sumbulhera,	99	0	6, ditto ditto,	0	15	6
	„ Jansuth,	109	14	4, increase ditto,	9	14	4
	„ Kutowlee,	97	14	0, ditto ditto,	2	2	0
	„ Bidowlee,	97	3	0, ditto ditto,	2	13	0
	„ Thannah Bhowun,	102	15	0, increase ditto,	2	15	0
	„ Jhinjhanah,	97	12	0, decrease ditto,	2	4	0
	„ Churthawul,	100	15	0, increase ditto,	0	15	0
Average ...		100	8	1½	0	8	1½

For purposes of assessment it was not necessary to extend the enquiry to ordinary market prices, and it is often difficult to obtain the prices current of former years; but

an investigation was made, by my directions, in Pergunnah Khutowlee, which shows that there, at any rate, the market prices have preserved their ratio to harvest prices, or, in other words, have not increased.

The great extension of the area under cultivation has probably retarded the inevitable increase of the price of most sorts of agricultural produce, while the consequent contraction of grazing land, by lessening the number of cattle, has enhanced their value, and that of articles dependent on them, such as ghee, hides, &c. But though statistics can furnish little information, except as to the increase and improvement of cultivation and the rise of rents, observation and enquiry prove beyond doubt that the agricultural classes are prospering.

The injustice of the system of ignoring proprietary rights and making over estates to agricultural communities at nominal rents is now generally admitted, and even its policy is questioned on general grounds. But there can be no doubt that it was eminently favorable to the accumulation of wealth by the more industrious classes of cultivators, and many of the bodies thus benefited have grown rich beyond all expectation. Similar results, in a modified degree, may be observed in the great mass of industrious cultivating communities. One remarkable indication of the general growth of wealth among the agricultural population is the great increase in the number of gold, or rather silver, smiths, and the amount of occupation which flows into their hands after a favorable harvest. The sums thus spent must be regarded not entirely as tributes to appearance, but also as investments which secure their possessor against the risk of recourse to the village money-lender. Less universal, but still by no means uncommon, are instances of cultivators utilizing their savings by putting them out at interest. The exceptions to the rule of prosperity among the more industrious classes are occasioned either by temporary reverses and consequent debt, which, once incurred, is almost irredeemable, and in rarer instances by rack-renting. The first of these obstacles can only be removed by a complete change in the habits of the peasantry. For the second, the most effectual remedy is the spread of that enquiring-spirit which every year tends to develope. Each entry in the settlement papers is now carefully noticed by those whom it affects, and extracts of the items relating to their interests are eagerly sought by them; while I am assured that at former settlements the greatest indifference was shown on these heads. In the meantime, the provisions of Act XIV. of 1863, which allow the Settlement Officer to fix an equitable rent in money in certain cases, will afford a measure of relief to many who are now disheartened by exactions for which they see no hope of remedy.

5. The basis of the assessment has been the rent rates prepared by Mr. Thornton for the former settlement. As well in this district as in Saharunpore, his estimates of produce, though made twenty years ago, have been found to represent correctly the present yield of the soil, and it has not therefore been necessary to incur the great expense and labor of collecting data for new calculations. But Mr. Thornton's somewhat minute system of classification has not been followed, and the number of circles to which separate rates are applied has been reduced to the minimum allowed by the varying nature of the soil in different parts of the pergunnah. The sand hills to the west have, of course, been treated exceptionally, and the rest of the high land has been divided into two classes, as the poor sandy soil bordering on the ridge of the Bangur could not bear the same rates as the good land through which the canal runs. The whole of the Khadir might, under ordinary circumstances, have formed one circle, but the increase of swamp in the northern estates has crippled their resources, and for the present they cannot be classed with the more favored tract of the south-west of the pergunnah. These circle rates have been supplemented and tested by the two rental estimates founded on the village papers which have been so fully described in the previous reports of Messrs. Keene, Martin, and Colvin. It would, however, be unfair to rely altogether upon these rates,

founded, the one on a classification of soils, the other upon the recorded produce ; for assessment based upon actual assets, or on what may be considered to represent them, would evidently bear upon the payers in proportion to their industry. Land gains a high artificial value by the careful processes of good farming, while bad cultivation extracts no adequate return from it ; so that a system of rental estimates which varies with amount of manuring and description of produce might show widely different results in two estates of precisely similar natural quality, but in different stages of development. In taking half the net produce from a cultivating zemindar of the more industrious class, we should make no allowance for the progressively increasing cost of production which notoriously attends every addition to the out-turn of land by mere ordinary means ; or, if it were not considered that the average production of the country had reached the stage beyond which all improvements are attended with increasing difficulty, it is certain that, by assessing on a highly artificial stage of prosperity, only produced by extraordinary labor, we force the continuance of those exertions under the penalty of loss of property on their cessation. The true principle appears to me to lie between the two extremes of, on the one hand, assessing merely with regard to the natural qualities of the land—a method in appearance scientific, in practice chimerical ; and, on the other, of disregarding, with short-sighted policy, all but immediate profit, and limiting the demand entirely by the capabilities of the payer. It remains to ascertain where the line is to be drawn,—what share of the additional produce created by the energy of an industrious cultivating zemindar is to be credited to wages of labor, and what to proprietary profits. The solution of the question may, I think, be attained by assessing estates owned and cultivated by the more industrious classes at the same rates as if the occupants were mere tenants paying rent to a landlord of different family.

It is true that rates thus determined will still be unequal, but it is not unjust that they should in some degree be affected by the character of the tenantry. If the intelligence of this class were more developed, and they were sufficiently awake to their own interests to seek the best market for their labor, all land possessing equal, or nearly equal, natural advantages would have full justice done to it ; but where the trammels of custom and of ignorance bind the laborer to his ancestral holding, full weight must be allowed to so important an element in the value of any estates as the quality of the cultivators. The landlord on whose estate a rich and industrious tenantry are firmly settled, by no exertion and at no expense of his own, may fairly be called upon to pay a higher rate than the neighbouring owner of an outlying “ muzra ” who can only attract cultivators by offering them favorable terms, and laying out money on houses and wells. The latter is behind the former in the race of development, and can only obtain a similar position at the cost of much time and money.

The inequality of receipts will not, however, be one full measure of the difference of produce as raised by good or bad cultivators ; for unless gross rack-renting exists—and such cases should in the present state of the law be exceptional—some portion of the increased yield, equivalent, or nearly so, to the wages due to increased labor, will be intercepted by the industrious cultivator. If the rents are paid in kind, the absence of strong inducement will probably relax his exertions, but even in this case it is obvious that his share will fluctuate in the same ratio as the yield, of which it is a fixed proportion, and that he has some though not the same marked interest in increasing the out-turn as if his rent were limited to a fixed sum in money. In the latter case, the incentive to improvement will depend much on the money demand not being more than equivalent to the old grain rent ; and, in practice, the landlord who commutes his rents from grain to money is generally induced to do so, not by a direct gain in money, but by the contingent advantages of greater rapidity and security of collection.

On the other hand, where, from listlessness, or a wish to conceal the real value of his estate, a land-holder has grown none but the inferior descriptions of crops, or has allowed much land to lie out of cultivation, I have not thought it necessary to be

guided altogether by the rent rates, which, in default of more specific information, may be considered exponents of actual condition. In such cases, after making allowances for all drawbacks of situation and for want of resources, the rate of assessment has been brought as nearly to the proper level—that is, to the rate determined for estates possessing no greater natural advantages—as was practicable, without endangering the Government revenue. Great caution, however, has been observed to make no sudden or violent changes, and not to place too much dependence on theoretical returns. The cause of variation from the average has been closely investigated in every instance, and often with success. Where it has been clearly proved to be of a temporary or removable nature,—such as a scale of rents lower, without due cause, than those prevailing in the neighbourhood, or want of energy in management,—no allowance has been usually made for it in assessment. Where, on the contrary, it has been established, either directly by the discovery of an obvious reason, or indirectly by a recurring deficiency of assets assignable to no other known cause, that abnormal barrenness of soil exists, the case has been treated as an exceptional one.

My object, then, has not been to equalize all rates, even in land of similar natural quality, but, allowing on the one hand for the remuneration justly due to extraordinary skill and labor, and on the other for unavoidable drawbacks and backwardness of progress, to establish some standard from which deviations in either direction should readily attract notice, and, where necessary, induce rectification. The obvious expedient has been a summary rate on irrigated and unirrigated land. In this pergunnah, a rate which results have shown to be reliable has been obtained by collating the old jumma rate of the circle, modified to half assets with the rate of an excellent rental estimate founded on the village papers and the accurate produce tables drawn up by Mr. Thornton. The general rate thus deduced was resolved into proportionate parts for irrigated and unirrigated land in the ratio of 5·7, which calculations, founded on extensive data left by Mr. Thornton, and on the genuine rent-rolls of five villages of the pergunnah, showed to be suitable.

The rates and the manner of their calculation are given in Appendices B. and C. Where there was much culturable land, as in the 2nd Bangur and the Khadir Circles, a malgoozaree rate based on similar data was also applied theoretically as the minimum limit of assessment; but it was necessary to go below it in a few cases where the assets were very small, and the hope of improvement little greater.

The result has been to furnish a pergunnah jumma, trustworthy as a whole, and requiring little change in its distribution.

But it has not been forgotten that, with every precaution of check and counter-check, the tendency of a system of estimate like the above is to represent things as they should be, rather than as they are. To some extent it may be legitimate to disregard existing states of fact when enquiry establishes that they are largely affected by the presence of temporary or fortuitous ingredients, and even if all rents were known and expressed in money, it would not necessarily result that assessments should blindly follow them; for actual condition is not so much the limit or measure of assessment, as the starting-point for consideration.

But while in a money-rented district this point is clearly laid down, it can at best be approximately ascertained in a pergunnah where, as here, grain rents prevail; and though, in the face of the ignorance and carelessness of the owners themselves, no amount of investigation can ascertain the exact truth in every case, much information may be collected from the various sources open to the Settlement Officer which may be utilized, not only in the estate itself whence facts are derived, but in others known to be in nearly similar circumstances. I subjoin a list of the methods which I have employed.

I. *Personal inspection.*—Every estate was carefully inspected by me in person, and as most of the proprietors in this district are non-resident, the principal cultivators usually accompanied me. In some cases they were able and willing to state approximately the amount of their payments to their landlord; if not, their conversation, and the appearance of their houses, cattle, and crops, enabled me to form some judgment as to whether rack-renting prevailed; or on the contrary, combination and custom had enabled them to intercept more than their legitimate share of the produce, and thus to lessen the apparent assets.

II. *Information derived from zemindars of the neighbourhood.*—In most cases I found that the larger owners entrusted their affairs to agents, who kept them in obscurity for their own purposes, and that the smaller proprietors were unable to supply anything but the wildest conjectures; but I obtained valuable information from the intelligent agent of one large landowner, regarding several estates which had formerly been held by his employer either in mortgage or in “mokurraree.”

III. “*Khuareh kunkoots*,” or genuine rent-rolls belonging to the zemindars, obtained in 8 villages, viz. :—

NO. OF ACRES.				RATE OF RENT.					
		<i>Irrigated.</i>	<i>Unirrigated.</i>	<i>Irrigated.</i>			<i>Unirrigated.</i>		
				Rs.	As.	P.	Rs.	As.	P.
Qazeepeer ...	...	209	...	2	13	3	...	...	...
Bhopa ...	...	72	...	4	1	9½	...	...	...
Mahmoodpeer ...	...	175	95	3	14	7½	2	8	11½
Bedaheree ...	...	64	...	2	7	7½	...	...	...
Buhera Saadat ...	...	177	1,199	2	13	3½	0	14	10
Morna ...	...	10	480	2	7	0½	1	11	2½
Kukrowlee ...	...	74	34	2	13	6	1	13	8½
Meemlakherree ...	...	17	...	3	11	6½	...	...	...
		812	1,808	3	4	4	1	12	2

IV. *Money rents* in 16 estates, or parts of estates, ranging from four annas to Re. 1 per “kutchah” beegah.

V. *The Canoongoe’s “doul,”* or rental estimate, to which I give special prominence, as it was the work of an officer himself a member of one of the Jât cultivating communities of the pergunnah, and therefore possessing excellent means of information. His estimate errs occasionally, on the true native principle of regarding the capabilities of the payer more than strict justice; but is, on the whole, very useful.

VI. *A statement of transfers,* showing the amount and price of land sold and mortgaged during the term of the last settlement. The number of estates owned by Syuds must weaken any deductions of over-assessment from constant transfers. This class openly allow that their expenses are regulated, not by their means, but by the supposed necessities of their position, and they consider any attempt to accommodate themselves to circumstances derogatory to their dignity. With these views, even the whole produce would not save them from debt, and no inference of insufficiency of assets can be drawn from their inadequacy to meet perfectly unregulated demands upon them. Indeed, I have not generally thought it necessary to make any reference to transfers in the remarks appended to the No. II. Statements of Syud Estates; but some clue may often be obtained to the value of an estate by the rate of purchase-money.

VII. *Financial History.*—Ease or difficulty of collection, and the necessity for punitive or coercive measures, have, of course, been carefully considered in every instance; but the lightness and general accuracy of the former assessment, supported as it has been by the introduction of canal irrigation, fortunately negated the presumption of over-assessment in most cases. In 35 estates the collections have been invariably made with ease; in 34 with some difficulty; in only one by duress.

VIII. *Suits for arrears of rent.*—Though the file was carefully examined, little assistance was derived from it,—as in some instances the area was not given ; in others, the suit had been laid for arrears of the famine year—an exceptional period ; and in others, again, the estimate of the crop had evidently been swelled by the malicious motive which had led to the institution of the suit.

IX. *The rent-rolls of estates held under " Kham " management.*—One large estate, and portions of others, confiscated in the rebellion, had been managed for two or three years by the Tehseeldar. The returns were inspected, but they proved to be of little value ; and a comparison of the zemindar's papers showed, in the principal case, that the management had been no exception to the proverbial inadequacy of Government officials to carry on private speculations.

6. The general results of the assessment will, I hope, be considered satisfactory.

The Government demand has been raised from
Result of assessment.

but I do not believe that its proportion to the net rental has exceeded the prescribed half. The increase is attributable entirely to the introduction of canal irrigation, as the increased revenue derivable from extension of cultivation would not have covered the deficiency occasioned by the reduction of the Government share of the net produce from two-thirds to one-half.

7. The engagement papers were in almost every case signed readily and without difficulty. Each lumberdar, as he came forward, was

Acceptance of assessment by zemindars. told that the grounds of assessment were open to him for inspection. In some cases, objectors availed themselves of this privilege, and the majority professed themselves convinced by their examination ; but in one or two instances valid reasons for reduction were adduced, to which full consideration was given. There was but one obstinate recusant,—the proprietor of the swamped estates near the Joghawalla Jheel ; but, precarious as are their proceeds, I cannot doubt that their assessments were exceedingly moderate, as several farmers were willing to take the lease of them for much larger sums than I had fixed. His objections were probably caused more by his litigious character, and the undue expectation of reduction which he had formed from the indulgence shown to him in the assessment of an estate in Pergunnah Poor, than by the severity of the new demand. Even in his case it was not eventually found necessary to have recourse to farm, and by far the greater majority of the zemindars signed in a few hours, without objection or discontent.

MEERUT :
The 9th November, 1863. }

C. GRANT,
Assistant, Settlement Department.

Note on assessment of Mozuffernugger irrespective of canal profits.

By the first estimate I made, according to which only irrigation from masonry and earth wells actually thrown into disuse by the canal, and irrigation from rivers, jheels, tauks, &c., was allowed for, the amount due to canal was Rs. 1,48,169. This estimate was disapproved of by Mr. R. Money, Senior Member Board of Revenue, for the reasons recorded in his minute, to be found among the annexures. It was held, that I had not made sufficient allowance for natural capability—that is, that I had not paid adequate consideration to the possibility of constructing " kutchha " wells where water was close to the surface.

2. In obedience to these instructions, I proceeded to make a fresh examination of all the pergunnahs liable to canal irrigation, with the view of ascertaining the depth of water, and the average number of kutchha wells which might reasonably be expected to ply were the canal to stop. The probability of digging pukka wells should not be considered, as any increased profits from such irrigation only covers interest of capital. Taking the division of circles as my basis, and after determining, with respect to natural capability, the amount of well irrigation which might be expected, I applied that average, *mutatis mutandis*, to each of the mouzahs of the cir-

ele; also, I bore in mind the fact that where full half assets had not been taken by deduced revenue rates, and the initial assessment was reputed to be low, there, obviously, canal profits should be reduced to a minimum. The result of this second estimate, so different to what I recommended, has been to fix canal profits as low as Rs. 74,830, or one-half.

3. On the other hand, it may be alleged that I have altogether omitted from my calculations the income from land now cultivated, but which would be lost to the proprietor were the canal to stop. No doubt, cultivation has been immensely stimulated by the facility of irrigating from canals, and there are many estates, which, if thrown back upon their natural capabilities, would retrograde, and emigration of labor take place; but I find it next to impossible to fix with any degree of accuracy what the area likely to be deserted would be, because all the old records have been destroyed. In lieu of making a fancy estimate, I have thought it probable the increasing population will of necessity have to break up every available acre of culturable land, and therefore the retrogression will in the long run be exceptional, and may be treated especially when it does occur.

4. In compliance with the suggestion of Mr. R. Money, I experimentally dug a well in Mozuffernugger. I came to water at 20 feet, after digging through substrata of sand; even for drinking purposes the well was of no use, much less for irrigating—in a couple of days it was choked up. I observed the same thing in Surwut, where attempts have recently been made to make two kutchha wells for drinking, but signally failed; there can be no doubt that as a rule kutchha wells cannot be constructed in Mozuffernugger, Poor Chupar, Bhokurheree, and Bhooma Sumbulhaira, the eastern pergunnahs of this district; consequently, there is here an utter dependence on the Ganges Canal, excepting of course any irrigation from masonry wells, tanks, &c. The people say unanimously that they frequently did try to make kutchha wells before the canal was introduced, but finding they fell in after the first rains, or so, they gave them up as impracticable; my own enquiries fully bear out the truth of this statement. Poor Chupar is a remarkable instance of freedom from wells, as will be seen from the return annexed to No. II. Statements. I have no hesitation in saying, that if the canal be withdrawn from these eastern pergunnahs, there would not be produced one-half of the present out-turn of the valuable products, such as cane, cotton, &c.; the difference, then, between an assessment including and one excluding canal profits under any form of account would here be greatest. Had I confined myself to reducing the two-third asset jummas of the last settlement to half assets, or had I taken the summary wet and dry rates fixed under Act XIV. 1863, the fall would have been much greater than that I have proposed.

5. Pergunnahs Thanna Bhowun, Shamlee, Kandla, and Kyrana, to the west of the district, have facilities for making earth wells, owing to the proximity of springs, except in the low line of country immediately bordering on the Eastern Jumna Canal, where the soil has become spongy from percolation and excessive flush irrigation. Although wells cannot be made where injury of this kind has occurred, such as in Yarpoor, Bhainswal, Shamlee, &c., still as water has been raised so near the surface, the soil is already humid, and it is questionable whether they would not be much better without any superficial irrigation;—that these estates have deteriorated, and are getting worse instead of better, is as clear as day-light: see my Report No. 107, dated 15th April, 1865. The soil in Pergunnah Shamlee and the Kandla valley is more fertile than anything to be seen in the eastern pergunnahs; hence, the assessments in Shamlee Pergunnah especially are heavier than anywhere else; the amount debitable to canal profits is less in proportion to the natural fertility of soil and means of irrigation. It will be seen, that in many large villages I have retained intact the original jumma.

6. However great the labor, I was obliged, in order to execute faithfully the orders of superior authority, to review the whole of the assessments of canal irrigated

estates, village by village ; in such a delicate enquiry as this, I cannot expect to have arrived at mathematical precision. The subject does not admit of it ; but I have endeavoured to ascertain as correctly as possible the natural capability of each property ; and, looking at the assessments proposed in the first instance, have recommended a proportionate reduction, or none at all, as the case required :—see Village Statements No. II. The pergunnahwar result of this revision is as follows :—

Pergunnah.	Initial jumma, including canal profits.	Jumma of canal irrigated villages.	Canal profits by first estimate.	Canal profits by second estimate.	Balance of jumma after deducting canal profits, second estimate.
	Rs. As. P.	Rs. As. P.	Rs.	Rs.	Rs. As. P.
Mozuffernugger ...	68,442 0 0	55,100 0 0	17,800	8,830	59,612 0 0
Poor Chupar ...	59,330 0 0	58,615 0 0	25,860	12,290	47,040 0 0
Bhokurharce ...	60,770 0 0	54,669 0 0	14,681	4,933	55,837 0 0
Bhooma ...	45,706 0 0	28,030 0 0	4,625	3,553	42,153 0 0
Jowlee Jansuth ...	58,578 0 0	54,333 0 0	8,505	3,716	54,862 0 0
Khatoulee ...	66,311 0 0	53,086 0 0	13,415	6,943	59,368 0 0
Boorhana ...	69,846 0 0	5,986 0 0	210	210	69,636 0 0
Shikarpoor ...	1,03,301 0 0	25,886 0 0	2,200	2,277	1,01,024 0 0
Bugra ...	81,691 0 0	21,520 0 0	6,017	3,227	75,464 0 0
Churthawul ...	61,257 0 0	18,903 0 0	3,664	1,850	59,407 0 0
Jhinjhana ...	56,698 0 0	31,085 0 0	3,740	2,767	53,931 0 0
Thannah Bhowun ...	57,081 10 0	42,774 10 0	9,101	6,024	51,057 10 0
Shamlee ...	1,20,057 0 0	77,370 0 0	12,139	5,107	1,14,950 0 0
Kandla ...	1,11,410 0 0	78,990 0 0	21,663	9,456	1,01,954 0 0
Kyranah ...	52,307 0 0	25,730 0 0	4,549	3,647	48,660 0 0
Total ...	10,72,785 10 0	6,42,077 10 0	1,48,169	74,830	9,27,955 10 0

Add Rs. 46,342 assessments on Pergunnahs Bedoulee and Gordhunpore where there is no canal, and the revenue for the whole district, independent of canal irrigation, will be ... Rs. 10,44,297 10 0

The revised jumma of the entire district before the discussion about canal profits was commenced ... Rs. 11,09,127 10 0 (excluding assessments on life mafees and permanent settlement.)

7. If it be finally determined to abandon an assessment at moiety of present rentals, Government must be prepared, as I have said all along, to submit to this loss of Rs. 74,830, reduced as it has been to the very lowest figure possible, for the sake of the principle of having an assessment unembarrassed by the canal. This loss may by some be considered trifling, but I still adhere to the opinion that Government ought not to throw away the difference for a theory of this kind, however recommendable it may appear ; if the jummas of each mehal be apportioned off—so much ordinary, and so much extraordinary revenue—the difficulty about irregularity of canal water supply would be at once obviated ; there need be no annual scrutiny, for at the worst the canal will only break down occasionally. When such a misfortune does occur, there is the extraordinary revenue, or a portion of it, as may be considered advisable, to be remitted, the permanent land revenue remaining unaffected.

8. I fail altogether to appreciate the wisdom of measures which sacrifice a considerable amount of land revenue throughout the North-Western Provinces for the sake of a principle which by no means appears vital. It is not sufficient to say that an assessment properly balanced according to the supposed natural capability system (I use the word *supposed* designedly, for where probable irrigation has to be estimated the data must be supposititious, and that such is the case is proved by the published Reports on the Canal Conference,) would entail a slight loss on Government ; everybody knows that in the majority of instances the features of estates are entirely altered after

canal water passes over the surface; numerous wells ready to hand are quite the exception; and even where such a happy state of things does exist, the practicability of making earth wells after superficial irrigation has been extensively applied from canals is questionable. The soil loses that adhesive character so necessary to the construction of wells, and a general tendency to choke up springs by falling in of sides is observed. These difficulties, however, it may be said, apply equally to my proposal of apportioning off the jummas; but there is this difference, that, under my views, errors could be rectified, whereas in the other case they become stereotyped.

9. I cannot now hope that any arguments I may have to advance at this stage of the discussion will have much effect; but I feel bound to say in my own defence, that had I been able to carry out my own views, I would have ascribed a larger amount to canal profits, than the sum now suggested under the directions of the Senior Member Board of Revenue; for instance, where cultivation had arrived at a "maximum" at the last settlement, there being no well irrigation, it would have been fair to reduce the two-third to half asset jumma, the difference between that and the revised jumma being credited to the canal; where cultivation had increased considerably, obviously this would not be a correct conversion, but in very many Jât villages there was no elbow-room left for the superabundant population; every available acre had been utilized when Mr. E. Thornton appeared on the scene in 1840. Whatever views I may individually hold on this, and what I have called a wholesale charge for imaginary wells, I have put them all aside in order to carry out the instructions of superior authority; and I sincerely trust this vexed question may now receive its solution, the settlement of this district being sanctioned either with or without canal profits. No argument is required to prove the immense advantage to the teeming population of this district by an early sanction to the settlement, which was commenced so far back as October, 1860; any little discrepancies observable may be overlooked, seeing that the general correctness of the assessments have been tested with complete success during the past two years; the valuable time gained by delaying the submission of the General Report has been well applied towards ascertaining the fitness, or otherwise, of the revised jummas.

S. N. MARTIN,
Collector.

Note on Mozuffernugger Settlement.

I have examined Mr. Martin's Settlement proceedings, with special reference to his estimates of the portion of jumma of canal irrigated estates that should be attributed to canal irrigation, and be remitted if the canal were to be permanently closed, or if the permanent settlement be made irrespectively of the additional assets now derived from the canal. His calculations have been made very elaborately and carefully, but they do not appear to me to fulfil all the requirements of the settlement.

He has given credit for all wells now in existence of which the use has been superseded by canal irrigation, and which might be immediately worked if the canal supply were to be stopped. This, however, in a majority of instances, is not sufficient.

It is sufficient in all cases where, with the sole exception of possible irrigation from masonry wells, an estate is exclusively dependent upon the canal for its irrigation; and this will generally be found to be the case in the sandy portions of the district. It is not intended that the possibility of constructing masonry wells should be taken into account, because, generally, the increased assets derived from the irrigation which they may afford should be regarded as only a fair return for the capital expended in their construction. This rule cannot, however, be applied to masonry wells already in existence; such wells must be regarded, and have been properly regarded by Mr. Martin, as contributing, or as capable of contributing, to the assets fairly chargeable with land revenue.

The defect in his calculations consists in his having omitted to take into account any existing natural facilities for artificial irrigation.

It is possible, that if the supply of canal water were to be suddenly withdrawn without previous notice, the estimate of Mr. Martin would very fairly represent the amount of land revenue proportioned to the *immediate* loss of assets that would be sustained.

The object, however, is to ascertain and determine the amount of land revenue that might be fairly demanded in perpetuity from an estate deprived altogether and for ever of canal irrigation. To this end, it is necessary in the first instance to ascertain the depth at which water is found; and, if the water is not at too great a depth, whether the nature of the soil admits of kutchha wells being easily dug.

Experience teaches us that where kutchha wells can be easily made, they always will be made when required; and in all cases where they can be easily made, the lands should be assumed to be irrigable, independently of the canal, notwithstanding they may now use canal irrigation exclusively.

The jummas to be fixed exclusive of the canal are not those that might be demanded immediately after a sudden and unexpected stoppage of the canal, but such as would be fairly realizable after a year or two, when the agriculturists should have had time to develop the available sources of artificial irrigation.

It has been found that where the culturable area of an estate is all easily irrigable from wells, the assets are not increased by canal irrigation. There are, on the contrary, many instances where the assets have been diminished. This has generally occurred from lands having become swamped by too abundant a supply of water.

Obviously, the canal cannot fairly take credit for any large portion of the assets, if the assets have not been increased by its action.

The consistency of the soil has in many estates been affected by percolation from the canal, so that kutchha wells cannot now be sunk, where they were formerly made without difficulty. In such cases, it is not to be presumed that the former status would be restored on the cessation of canal irrigation, and allowance must be made accordingly.

Irrigation that may be practicable from rivers, jheels, or tanks, is of course to be taken into consideration, equally with such as may be obtainable from wells.

Mr. Martin has allowed 22 acres as the amount of land irrigable from a well with one run. This allowance appears to me to be excessive. The correctness of the estimate should be tested.

Very unfortunately the Nos. II. and III. Statements of the former settlement of this district have been lost, and there is therefore no record of the amount of land that was irrigable from wells independently of the canal, or before the advent of the Ganges Canal. Such a record would have been of material assistance to an Officer engaged in making the required investigation. Much information must, however, be obtainable from the Canoongoes and other Pergunnah Officers, and from the village Putwarees; and here and there, in cases of doubt, or by way of experiment, a kutchha well might be dug to ascertain the possibility of sinking one that will stand. Any cost incurred on this account might be charged against contingencies of the Settlement Department.

This note is given to Mr. Martin, who is requested to revise his proceedings in all cases where revision may appear to be necessary with reference to the above remarks; and he is requested to return the original note, after causing a copy to be made for his own use.

(Sd.) R. MONEY.

Mozuffernugger, the 25th March, 1865.

PERGUNNAH BHOKURHAREE.

Statement showing profits due to the operation of the Ganges Canal.

1. Number.	2.				3.				
	Name of Mouzah.				AREA IRRIGATED BY CANAL.				
					Meesun.	Roslee.	Dakur.	Bhoor.	Total.
1	Athance	...	...	...	367	546	...	...	913
2	Behra Thoaroo	...	...	...	264	387	...	...	651
3	Belrah	...	...	...	282	639	13	15	949
4	Bhedaharee	...	...	...	30	117	...	8	155
5	Bhopa	...	...	...	494	570	...	12	1,076
6	Tissa	...	...	...	736	884	19	2	1,641
7	Teora	...	...	...	640	540	11	22	1,213
8	Dowlutpoor	...	...	...	23	196	17	4	240
9	Dheraharee	...	...	...	121	337	6	23	487
10	Raipoor	...	...	...	28	96	...	...	124
11	Ruhnutpoor	...	...	...	171	226	...	...	397
12	Sekunderpoor	...	...	...	269	83	1	...	353
13	Kazeepoor	...	...	...	116	106	...	2	224
14	Kurahra	...	...	...	452	505	11	162	1,130
15	Kukrolee	...	...	...	270	341	4	...	615
16	Khace Khara	...	...	...	116	251	...	...	367
17	Khoknee	...	...	...	58	441	...	...	499
18	Gadlah	...	...	...	204	560	13	...	777
19	Gudwara	...	...	...	114	107	...	...	221
20	Mahmoodpoor Majra	...	...	...	87	304	...	...	391
21	Mulpoora	...	...	...	240	322	8	...	570
22	Meemla Kharee	...	...	...	137	167	5	15	324
23	Nirgajnee	...	...	...	245	124	...	4	373
24	Nulhara	...	...	...	173	349	15	...	537
25	Nulharee	...	...	...	23	282	4	1	310
26	Yousufpoor	...	...	...	142	328	...	48	518
Total (Chuk Tissa)					5,802	8,808	127	318	15,055
1	Behra Sadat	...	...	...	279	193	9	...	481
2	Bhokurharee	...	...	...	870	1,895	14	9	2,788
3	Bhoapoor	...	...	...	...	385	...	...	385
4	Chourawala	...	...	...	333	315	2	...	650
5	Chuchroulee	...	...	...	256	527	...	...	783
6	Duryabad	...	...	...	6	139	...	...	145
7	Duryapoor	...	...	...	20	151	...	36	207
8	Sookurtaree	...	...	...	10	325	...	1	336
9	Seekree	...	...	...	156	456	...	6	618
10	Ferozepoor	...	...	...	...	326	...	...	326
11	Khurpoor	...	...	...	2	373	...	8	383
12	Kharee	...	...	...	...	264	...	...	264
13	Kishunpoor	...	...	...	290	337	1	...	628
14	Kukrala	...	...	...	124	135	...	12	271
15	Mornah	...	...	...	106	54	1	3	164
16	Wuzeerabad	...	...	...	278	555	11	16	860
Total (Chuk Bhokurharee)					2,730	6,430	38	91	9,289
1	Burookee	...	...	...	68	27	...	2	97
2	Russoolpoor	...	...	...	50	135	11	...	196
3	Ruhkura	...	...	...	87	393	3	18	501
4	Kussoulee	...	...	...	...	100	...	...	100
Total (Chuk Joulee)					205	655	14	20	894
GRAND TOTAL					8,737	15,893	179	429	25,238

PERGUNNAH

Statement showing profits due to the operation

1.	2.	4.														
Number.	Name of Mouzah.	REVENUE RATE PER IRRIGATED ACRE.								REVENUE						
		Meesun.		Roslee.		Dakur.		Bhoor.		Meesun.						
		Rs.	As. P.	Rs.	As. P.	Rs.	As. P.	Rs.	As. P.	Rs.	As. P.					
1	Athance ...	2	4	0	1	11	0½	1	1	4½	...	825	12	0		
2	Behra Thooroo ...	2	4	0	1	15	6½	1	1	4½	...	594	0	0		
3	Belrah ...	2	4	0	1	15	6½	1	1	4½	0	11	11½	634	8	0
4	Bhedaharee ...	2	4	0	1	15	6½	1	1	4½	1	7	2	67	8	0
5	Bhopa ...	2	4	0	1	15	6½	1	1	4½	1	7	2	1,111	8	0
6	Tissa ...	2	4	0	1	11	0½	1	8	0	0	11	11½	1,656	0	0
7	Teora ...	2	4	0	1	15	6½	1	1	4½	1	7	2	1,440	0	0
8	Dowlutpoor ...	2	4	0	1	15	6½	1	1	4½	0	11	11½	51	12	0
9	Dheraharee ...	2	4	0	1	15	6½	1	1	4½	1	7	2	272	4	0
10	Raipoor ...	2	4	0	1	15	6½	1	1	4½	1	7	2	63	0	0
11	Ruhmutpoor ...	2	4	0	1	11	0½	1	1	4½	1	7	2	384	12	0
12	Sekunderpore ...	2	4	0	1	15	6½	1	1	4½	1	7	2	605	4	0
13	Kazeepoor ...	2	4	0	1	15	6½	1	1	4½	1	7	2	261	0	0
14	Kurahra ...													1,017	0	0
15	Kukrolee ...													607	8	0
16	Khasee Khara ...													261	0	0
17	Khoknee ...													130	8	0
18	Gadlah ...													459	0	0
19	Gudwara ...													256	8	0
20	Mahmoodpoor Majra ...													195	12	0
21	Mulpoora ...													540	0	0
22	Meemla Kharee ...													308	4	0
23	Nirgajnee ...													551	4	0
24	Nulhara ...													389	4	0
25	Nulharee ...													51	12	0
26	Yousufpoor ...	319	8	0												
Total (Chuk Tissa) ...		...	...	...	...	...	...	...	...	...	...	...	...	13,054	8	0
1	Behra Sadat ...	1	11	6½	1	8	0½	1	1	10	...	480	5	0		
2	Bhokurharee ...	1	11	6½	1	8	0½	1	2	4	1	1	10	1,498	11	0
3	Bhoapoor ...	1	11	6½	1	11	0½	1	2	4	1	1	10	...		
4	Chourawala ...	2	4	3	1	11	0½	1	8	0	...	754	7	0		
5	Chuchroulee ...	1	11	6½	1	8	0½	...	...	...	...	441	6	0		
6	Duryabad ...	2	4	3	1	11	0½	...	...	...	...	13	10	0		
7	Duryapoor ...	2	4	3	1	11	0½	...	...	0	11	11½	45	5	0	
8	Sookurtaree ...	1	11	6½	1	8	0½	...	...	1	1	10	17	4	0	
9	Seekree ...	1	11	6½	1	8	0½	...	...	1	1	10	268	12	0	
10	Ferozepoor ...	1	11	6½	1	8	0½	...	...	...	...	...	...
11	Khurpoor ...	1	11	6½	1	8	0½	...	...	1	1	10	3	7	0	
12	Kharee ...	1	11	6½	1	8	0½	...	...	...	...	...	...
13	Kishunpoor ...	1	11	6½	1	8	0½	1	1	4½	...	499	8	0		
14	Kukrala ...	1	11	6½	1	8	0½	...	...	1	1	10	213	10	0	
15	Mornah ...	1	11	6½	1	8	0½	1	1	10	1	1	10	182	10	0
16	Wuzeerabad ...	1	11	6½	1	8	0½	1	2	4	1	1	10	478	14	0
Total (Chuk Bhokurharee) ...		...	...	...	...	...	...	...	...	...	...	...	...	4,897	7	0
1	Burokee ...	1	12	1½	1	5	10½	1	0	11½	1	3	8½	119	8	0
2	Russoolpoor ...													87	14	0
3	Ruhkura ...													152	15	0
4	Kussoulee ...													...
Total (Chuk Joulee) ...		...	...	...	...	...	...	...	...	...	...	...	...	360	5	0
GRAND TOTAL ...		...	...	...	...	...	...	...	...	...	...	...	...	18,312	4	0

BHOKURHAREE.

of the Ganges Canal—(Continued.)

5.				6.			
ON IRRIGATED AREA.				REVENUE RATE PER UNIRRIGATED ACRE.			
Roslee.	Dakur.	Bhoor.	Total.	Meesun.	Roslee.	Dakur.	Bhoor.
Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
922 13 0	...	...	1,748 9 0	1 6 11	1 6 11	0 15 11	0 12 1
762 15 0	...	...	1,356 15 0	1 6 11	1 6 11	0 15 11	0 12 1
1,259 11 0	14 1 0	11 3 0	1,919 7 0	1 6 11	1 6 11	0 15 11	0 11 3
230 10 0	...	11 9 0	309 11 0	1 6 11	1 6 11	0 15 11	0 12 1
1,123 11 0	...	17 6 0	2,252 9 0	1 6 11	1 6 11	0 15 0	0 12 1
1,494 1 0	28 8 0	1 8 0	3,180 1 0				
1,064 8 0	12 1 0	31 13 0	2,548 6 0				
386 6 0	18 7 0	3 0 0	459 9 0				
664 5 0	6 8 0	33 5 0	976 6 0				
189 4 0	...	...	252 4 0				
381 15 0	...	...	766 11 0	1 6 11	1 6 11	0 15 0	0 12 1
163 10 0	1 1 0	...	769 15 0				
208 15 0	...	2 14 0	472 13 0				
995 9 0	11 15 0	234 9 0	2,259 1 0				
672 4 0	4 5 0	...	1,284 1 0				
494 13 0	...	...	755 13 0				
869 6 0	...	...	999 14 0	0 15 11	0 15 11	0 15 11	0 12 1
1,103 15 0	14 1 0	...	1,577 0 0	1 6 11	1 6 11	0 15 11	0 12 1
210 15 0	...	...	467 7 0	1 6 0½	1 6 0½	0 15 11	0 12 1
599 5 0	...	...	795 1 0	1 6 11	1 6 11	0 15 11	0 12 1
634 12 0	8 11 0	...	1,183 7 0				
329 3 0	5 7 0	21 12 0	664 10 0				
244 7 0	...	5 13 0	801 8 0	1 6 11	1 6 11	0 15 11	0 12 1
688 0 0	16 4 0	...	1,093 8 0				
555 15 0	4 5 0	1 7 0	613 7 0				
646 10 0	...	69 8 0	1,035 10 0				
16,897 14 0	145 10 0	445 11 0	30,543 11 0	...	...	...	...
290 4 0	10 1 0	...	780 10 0				
2,849 15 0	16 1 0	10 1 0	4,374 12 0				
650 11 0	...	...	650 11 0				
535 12 0	3 0 0	...	1,293 3 0				
792 9 0	...	...	1,233 9 0				
234 15 0	...	...	248 9 0				
255 3 0	...	26 14 0	327 6 0				
488 12 0	...	1 2 0	507 2 0	1 1 5½	1 1 5½	1 0 9½	0 9 3½
685 12 0	...	6 11 0	961 3 0				
490 4 0	...	...	490 4 0				
560 15 0	...	8 15 0	573 5 0				
397 0 0	...	...	397 0 0				
506 13 0	1 1 0	...	1,007 6 0				
203 0 0	...	13 0 0	429 10 0				
81 3 0	1 2 0	3 6 0	268 5 0				
834 11 0	12 10 0	17 13 0	1,344 0 0				
9,857 11 0	43 15 0	87 14 0	14,886 15 0	...	...	...	...
36 15 0	...	2 7 0	158 14 0	0 12 6½	0 12 6½	0 8 5½	0 8 5½
184 9 0	11 10 0	...	284 1 0	0 15 11	0 15 11	0 8 5½	0 8 5½
537 8 0	3 3 0	22 2 0	715 12 0	0 15 11	0 15 11	0 8 5½	0 8 5½
136 11 0	...	...	136 11 0	0 15 11	0 15 11	0 8 5½	0 8 5½
895 11 0	14 13 0	24 9 0	1,295 6 0	...	...	...	...
27,651 4 0	204 6 0	558 2 0	46,726 0 0	...	...	...	...

PERGUNNAH

Statement showing profits due to the operation

1. Number.	2. Name of Mouzah.			7. REVENUE ON UNIRRIGATED AREA.														
				Meesun.					Roalee.					Dakur.				
				Bhoor.					Total.									
				Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.
1	Athane...	...	...	525	10	0	772	0	0	...	...	...	1,297	10	0			
2	Behra Thooroo	...	...	378	2	0	554	5	0	...	...	...	932	7	0			
3	Belrah	...	...	403	14	0	915	4	0	12	15	0	1,342	10	0			
4	Bhedaharee	...	...	42	15	0	167	9	0	...	...	...	216	9	0			
5	Bhopa	...	...	707	9	0	816	7	0	...	...	...	1,533	1	0			
6	Tissa	...	...	1,054	3	0	1,266	2	0	18	14	0	2,340	11	0			
7	Teora	...	...	916	11	0	773	7	0	10	15	0	1,717	11	0			
8	Dowlutpoor	...	...	32	15	0	280	12	0	16	15	0	333	10	0			
9	Dheraharee	...	...	173	5	0	482	11	0	5	15	0	679	5	0			
10	Raipoor	...	...	40	2	0	137	8	0	...	...	...	177	10	0			
11	Ruhmutpoor	...	...	244	15	0	323	11	0	...	...	...	568	10	0			
12	Sekunderpoor	...	...	385	5	0	118	14	0	1	0	0	505	3	0			
13	Kazeepoor	...	...	166	2	0	151	13	0	...	...	...	319	7	0			
14	Kurahra	...	...	647	6	0	723	5	0	10	15	0	1,504	0	0			
15	Kukrolee	...	...	386	12	0	498	7	0	4	0	0	889	3	0			
16	Khasee Khara	...	...	166	2	0	359	8	0	...	...	...	525	10	0			
17	Khoknee...	...	...	57	11	0	438	11	0	...	...	...	496	6	0			
18	Gadlah	...	...	292	3	0	802	1	0	12	15	0	1,107	3	0			
19	Gudwara	...	...	157	1	0	147	6	0	...	...	...	304	7	0			
20	Mahmoodpoor Majra	...	...	124	10	0	435	7	0	...	...	...	560	1	0			
21	Mulpoora	...	...	343	12	0	461	3	0	7	15	0	812	14	0			
22	Meemla Kharee	...	...	196	4	0	239	8	0	5	0	0	451	12	0			
23	Nirgajnee	...	...	350	15	0	177	10	0	...	...	...	531	9	0			
24	Nulhara	...	...	247	13	0	499	14	0	14	15	0	762	10	0			
25	Nulharee	...	...	82	15	0	403	14	0	4	0	0	441	9	0			
26	Yousufpoor	...	...	203	6	0	469	13	0	...	...	...	709	7	0			
Total (Chuk Tissa.)				8,278	10	0	12,416	13	0	126	6	0	239	6	0	21,061	3	0
1	Behra Sadat	...	...	304	7	0	210	9	0	9	7	0	594	7	0			
2	Bhokurharee	...	...	949	5	0	2,067	12	0	14	11	0	3,037	0	0			
3	Bhoapoor	...	...	...	...	...	420	1	0	...	...	...	420	1	0			
4	Chourawala	...	...	363	8	0	343	11	0	2	2	0	709	5	0			
5	Churchroulee	...	...	279	5	0	575	1	0	...	...	...	854	6	0			
6	Duryabad	...	...	6	9	0	157	11	0	...	...	...	158	4	0			
7	Duryapoor	...	...	21	13	0	164	12	0	...	...	...	207	8	0			
8	Sookurtaree	...	...	10	15	0	354	10	0	...	...	...	366	2	0			
9	Seekree	...	...	170	4	0	497	9	0	...	...	...	671	5	0			
10	Ferozepoor	...	...	...	...	...	355	11	0	...	...	...	355	11	0			
11	Khurpoor	...	...	2	3	0	407	0	0	...	...	...	413	13	0			
12	Kharee	...	...	...	...	...	288	1	0	...	...	...	288	1	0			
13	Kishunpoor	...	...	316	7	0	367	11	0	1	1	0	685	3	0			
14	Kukrala	...	...	135	5	0	147	5	0	...	...	...	289	10	0			
15	Mornah	...	...	115	11	0	58	15	0	1	1	0	177	7	0			
16	Wuzeerabad	...	...	303	5	0	605	9	0	11	9	0	929	12	0			
Total (Chuk Bhokurharee.)				2,979	1	0	7,016	0	0	39	15	0	52	15	0	10,087	15	0
1	Burokee	...	...	53	3	0	21	2	0	...	...	...	75	6	0			
2	Russoolpoor	...	...	49	12	0	134	5	0	5	13	0	189	14	0			
3	Ruhkura	...	...	86	9	0	390	15	0	1	9	0	488	9	0			
4	Kussoulee	...	...	...	...	...	99	8	0	...	...	...	99	8	0			
Total (Chuk Joulee.)				189	8	0	645	14	0	7	6	0	858	5	0			
GRAND TOTAL				11,447	3	0	20,078	11	0	173	11	0	302	14	0	32,002	7	0

BHOKURHAREE.

of the Ganges Canal—(Continued.)

8. Difference of revenue between irrigated and unirrigated.	9. Number of wells closed by Canal.	10. TWENTY-TWO ACRES ALLOWED TO EACH WELL.					11. REVENUE DERIVABLE FROM WELL IRRIGATION.				
		Meesun.	Roalee.	Dakur.	Bhoor.	Total.	Meesun.	Roalee.	Dakur.	Bhoor.	Total.
Rs. As. P.							Rs. A. P.	Rs. A. P.	Rs.	Rs. A. P.	Rs. As. P.
450 15 0
424 8 0
576 13 0
93 2 0
719 8 0
839 6 0
830 11 0
125 15 0
297 1 0
74 10 0
198 1 0
264 12 0
158 6 0
755 1 0	2	18	20	...	6	44	40 8 0	39 6 0	...	8 11 0	88 9 0
394 14 0
230 3 0
503 8 0
469 13 0	1	6	16	...	...	22	13 8 0	31 9 0	...	...	45 1 0
163 0 0
235 0 0
370 9 0
212 14 0
269 15 0
330 14 0
171 14 0
326 3 0
9,482 8 0	3	24	36	...	6	66	54 0 0	70 15 0	...	8 11 0	133 10 0
256 3 0
1,337 12 0
230 10 0
583 14 0
379 8 0
90 5 0
119 14 0
141 0 0
289 14 0
134 9 0
159 8 0
108 15 0
322 3 0
140 0 0
90 14 0
414 4 0
4,799 0 0
83 8 0
94 3 0
227 3 0
37 3 0
442 1 0
14,723 9 0	3	24	36	...	6	66	54 0 0	70 15 0	...	8 11 0	133 10 0

PERGUNNAH

Statement showing profits due to the operation

1. Number.	2. Name of Mouzah.	12.				
		REVENUE ON WELL IRRIGATED AREA BY DRY RATE.				
		Meesun.	Roslee.	Dakur.	Bhoor.	Total.
		Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
1	Athane	...	...	...	...	...
2	Behra Thooroo	...	...	...	...	...
3	Belrah	...	...	...	...	...
4	Bhedaharee	...	...	...	...	...
5	Bhopa	...	...	...	...	...
6	Tissa	...	...	...	...	...
7	Teora	...	...	...	...	...
8	Dowlutpoor	...	...	...	...	...
9	Dheraharee	...	...	...	...	...
10	Raipoor	...	...	...	...	...
11	Ruhmutpoor	...	...	...	...	...
12	Sekunderpoor	...	...	...	...	...
13	Kaseepoor	...	...	...	...	...
14	Kurahra	25 12 0	28 10 0	...	4 9 0	58 15 0
15	Kukrolee	...	...	...	...	...
16	Khaee Khara	...	...	...	...	...
17	Khoknee	...	...	...	...	...
18	Gadlah	8 10 0	22 15 0	...	...	31 9 0
19	Gudwara	...	...	...	...	...
20	Mahmoodpoor Majra	...	...	...	...	...
21	Mulpoora	...	...	...	...	...
22	Meemla Kharee	...	...	...	...	...
23	Nirgajnee	...	...	...	...	...
24	Nulhara	...	...	...	...	...
25	Nulharee	...	...	...	...	...
26	Yousufpoor	...	...	...	...	...
Total (Chuk Tissa.)		34 6 0	51 9 0	...	4 9 0	90 8 0
1	Behra Sadat	...	...	...	...	...
2	Bhokurharee	...	...	...	...	...
3	Bhoapoor	...	...	...	...	...
4	Chourawala	...	...	...	...	...
5	Chuchroulee	...	...	...	...	...
6	Duryabad	...	...	...	...	...
7	Duryapoor	...	...	...	...	...
8	Sookurtaree	...	...	...	...	...
9	Seekree	...	...	...	...	...
10	Ferozepoor	...	...	...	...	...
11	Khurpoor	...	...	...	...	...
12	Kharee	...	...	...	...	...
13	Kishunpoor	...	...	...	...	...
14	Kukrala	...	...	...	...	...
15	Mornah	...	...	...	...	...
16	Wuzcerabad	...	...	...	...	...
Total (Chuk Bhokurharee.)		...	...	...	...	...
1	Burokee	...	...	...	...	...
2	Russoolpoor	...	...	...	...	...
3	Ruhkura	...	...	...	...	...
4	Kussoulee	...	...	...	...	...
Total (Chuk Jonlee.)		...	...	...	...	...
GRAND TOTAL		34 6 0	51 9 0	...	4 9 0	90 8 0

BHOKURHAREE.

of the Ganges Canal.—(Concluded.)

13.	14.	15.
Difference of revenue on area irrigated by wells.	Actual profits due to Canal.	Remarks.
Rs. As. P.	Rs. As. P.	
...	450 15 0	Excepting the <i>khadir</i> lands, the <i>bangur</i> villages are high and dry; kutchas wells are unknown; 17 masonry wells only, and those are mostly used for watering groves and gardens; average distance of water from surface of soil, 30½ feet; depth of water in wells, 25 feet; masonry wells are said to cost upwards of Rs. 1,000, and the soil is too sandy to admit of the construction of kutchas wells. Suppose it be presumed that one well might be constructed to 100 acres of cultivation, then the account would stand thus:—
...	424 8 0	Total cultivated area in acres ... 44,193
...	576 13 0	One well to 100 acres ... 442 wells.
...	93 2 0	Of these 17 masonry wells in existence, the balance, 425 kutchas wells, allow 10 acres of irrigation to a pukka well with water so remote, and 8 acres to a kutchas well.
...	719 8 0	
...	839 6 0	
...	830 11 0	
...	125 15 0	
...	297 1 0	
...	74 10 0	
...	198 1 0	
...	264 12 0	
...	153 6 0	
29 10 0	725 7 0	
...	394 14 0	
...	230 3 0	
...	503 8 0	
13 8 0	456 5 0	
...	163 0 0	
...	235 0 0	
...	370 9 0	
...	212 14 0	
...	269 15 0	
...	330 14 0	
...	171 14 0	
...	326 3 0	
43 2 0	9,439 6 0	
...	256 3 0	
...	1,337 12 0	
...	230 10 0	
...	583 14 0	
...	379 3 0	
...	90 5 0	
...	119 14 0	
...	141 0 0	
...	289 14 0	
...	134 9 0	
...	159 8 0	
...	108 15 0	
...	322 3 0	
...	140 0 0	
...	90 14 0	
...	414 4 0	
...	4,799 0 0	
...	83 8 0	
...	94 3 0	
...	227 8 0	
...	37 3 0	
...	442 1 0	
43 2 0	14,680 7 0	

Excepting the *khadir* lands, the *bangur* villages are high and dry; kutchas wells are unknown; 17 masonry wells only, and those are mostly used for watering groves and gardens; average distance of water from surface of soil, 30½ feet; depth of water in wells, 25 feet; masonry wells are said to cost upwards of Rs. 1,000, and the soil is too sandy to admit of the construction of kutchas wells. Suppose it be presumed that one well might be constructed to 100 acres of cultivation, then the account would stand thus:—

Total cultivated area in acres ... 44,193
One well to 100 acres ... 442 wells.
Of these 17 masonry wells in existence, the balance, 425 kutchas wells, allow 10 acres of irrigation to a pukka well with water so remote, and 8 acres to a kutchas well.

Acres.	Rs. As. P.	average re-venue rate.	Rs. As. P.
17 masonry wells × 10 = 170 ×	} 1 6 8		5,057 8 0
425 "kutchas" ditto × 8 = 3,400 ×			

3,570 acres.

	Rs. As. P.
40,623 unirrigated acres × 15 annas and 6 pie, ditto	39,353 8 6

Total Government demand	44,411 0 6
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Actual revised demand	55,951 0 0
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Difference due to canal profits	11,539 15 6
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Canal profits by first Estimate	14,681 0 0
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Canal profits by second Estimate,	4,933 0 0
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Under orders of Senior Member, Board of Revenue, I have not attempted to make any calculation of the income of lands likely to be thrown out of cultivation by the stoppage of the canal, as I have no data by me to work it out. I prefer taking it for granted that the high rate of increase in the population will necessarily keep up the cultivation to the mark. The mutiny destroyed all the old valuable records of the district, consequently we have no guide to the actual state of things before canal water was introduced. One thing however is pretty certain, there is no well irrigation in this pergunnah, and therefore there must be a great dependence on the canal.

In opposition to the argument above adduced, I can imagine some might hold the opinion that in such a pergunnah the stoppage of the canal would probably cause superabundant population to emigrate elsewhere for more productive land; time alone can prove it.

S. N. MARTIN,

Collector.

Abstract of Statement A.

B.

Number.	Pargunnah.	Name of Mouzah.	Area irrigated by Canal.	Difference of revenue between irrigated and unirrigated rates.	Difference of revenue on area irrigated by wells.	Actual profits due to Canal.	Remarks.
1	Bhokurhar.	Athanes ...	913	451	—	451	No deduction necessary on account of canal. Original jumma below deduced rates.
2		Behra Thooroo ...	651	325	—	325	Ra. 230 allowed for canal profits.
3		Belrah ...	949	577	...	577	Ra. 250 canal profits.
4		Bhedhaharee ...	155	93	...	93	No deduction necessary on account of canal ; original jumma low.
5		Bhopa ...	1,076	719	...	719	Ra. 360 canal profits.
6		Tissa ...	1,641	839	...	839	Ra. 350 ditto.
7		Teora ...	1,213	831	...	831	Ra. 400 ditto.
8		Dowlutpoor ...	240	126	...	126	No deduction necessary ; jumma considerably below.
9		Dheraharee ...	497	297	...	297	Ra. 150 canal profits.
10		Raipoor ...	124	75	...	75	Ra. 48 ditto.
11		Ruhmutpoor ...	397	198	...	198	Ra. 100 ditto.
12		Sekunderpoor ...	353	265	...	265	Ra. 100 ditto.
13		Kazeepoor ...	324	153	...	153	Ra. 70 ditto.
14		Kurahra ...	1,130	755	30	725	Ra. 400 ditto.
15		Kukrolee ...	615	395	...	395	No deduction necessary ; initial jumma low ; and much culturable.
16		Khaseekhara ...	367	230	...	230	100 Ra. canal profits.
17		Khoknee ...	499	504	...	504	No deduction necessary ; original jumma low.
18		Gadlah ...	777	470	13	457	Ra. 130 canal profits.
19		Gudwara ...	221	163	...	163	Ra. 160 ditto.
20		Mahmeodpoor ...	391	235	...	235	Ra. 190 ditto.
21		Mulpoora ...	570	371	...	371	Ra. 100 ditto.
22		Meemla Kharee ...	334	213	...	213	Ra. 100 ditto.
23		Nirgajnee ...	373	270	...	270	Ra. 200 ditto.
24		Nulhara ...	337	331	...	331	Ra. 180 ditto.
25		Nulharee ...	310	172	...	172	No deduction necessary ; jumma low ; and much culturable.
26		Yousufpoor ...	518	326	...	326	Ra. 120 canal profits.
		Total Chuk Tissa ...	15,055	9,493	25	9,440	Ra. 3,738.
1	Bhokurhar.	Behra Sadat ...	481	256	...	256	Ra. 250 allowed for canal profits.
2		Bhokurharee ...	2,788	1,338	...	1,338	Ra. 200 only allowed for canal profits ; much culturable area, and soil mostly productive.
3		Bhoapoor ...	331	231	...	231	No deduction necessary on account of canal ; original jumma moderate.

Abstract of Statement A.—(Concluded.)

B.

Number.	Pergunnah.	Name of Mouzah.	Area irrigated by Canal.	Difference of revenue between irrigated and unirrigated rates.	Difference of revenue on area irrigated by wells.	Actual profits due to Canal.	Remarks.
4	Bhokurharee. — (Continued.)	Chowawala ...	650	584	...	584	No deduction necessary on account of canal; much culturable land left.
5		Chuchroulee ...	783	379	...	379	Rs. 100 canal profits.
6		Duryabad ...	145	90	...	90	No deduction necessary; revised jumma moderate; and much culturable.
7		Duryapoor ...	207	120	...	120	No deduction, for the same reasons as above.
8		Sookurtaree ...	336	141	...	141	Ditto.
9		Seekree ...	618	290	...	290	Rs. 200 canal profits.
10		Ferozepoor ...	326	135	...	135	No deduction; jumma below deduced rates; and much culturable.
11		Khurpoor ...	383	159	...	159	No deduction for the same reasons as above.
12		Kharee ...	264	109	...	109	Ditto.
13		Kial unpoor ...	628	322	...	322	Rs. 30 canal profits; initial jumma low.
14		Kukrala ...	271	140	...	140	Rs. 55 ditto ditto.
15		Mornah ...	164	91	...	91	No deduction necessary on account of canal; jumma moderate.
16		Wuzeerabad ...	860	414	...	414	Rs. 210 canal profits.
		Total, Chuk Bhokurharee	9,289	4,799	...	4,799	
1		Burokee ...	97	84	...	84	Rs. 50 allowed for canal profits.
2		Russoolpoor ...	196	94	...	94	No deduction necessary; jumma much below deduced rates.
3		Ruhkura ...	501	227	...	227	Rs. 100 canal profits.
4		Kunsoulee ...	100	37	...	37	No deduction necessary; jumma below deduced rates.
		Total, Chuk Joulee	894	442	...	442	
		GRAND TOTAL	25,238	14,724	48	14,681	Rs. 4,933

The reason why so small a sum has been allowed for canal profits, is the lowness of Mr. C. Grant's revised jummas,—being frequently below average deduced revenue rates. I have examined each village, and fixed such a sum as I believe will stand the strain of stoppage of canal.

S. N. MARTIN,
Collector.

PERGUNNAH

Statement showing profits due to the

1. Number.	2. Name of Mouzah.	3. AREA IRRIGATED BY CANAL.					REVENUE RATE PER	
		Meesun.	Roslee.	Dakur.	Bhoor.	Total.	Meesun.	Roslee.
							Ra. As. P.	Ra. As. P.
1	Budheewala ...	10	22	1	...	33	2 13 3½	2 1 9½
2	Bummunharce ...	17	314	25	16	372		
3	Beebepore ...	13	201	...	...	214		
4	Puchenda Khoord ...	96	138	20	8	262		
5	Chandpore ...	29	249	3	28	309		
6	Rampore ...	90	331	12	4	437		
7	Raicee ...	24	453	5	4	486		
8	Sisona ...	132	833	76	3	1,064		
9	Sojroo ...	20	243	46	...	309		
10	Shahb-ood-deen-pore ...	38	465	31	...	534		
11	Shairpore ...	55	193	21	2	271		
12	Shairnugger ...	85	374	8	...	467		
13	Mirzapore ...	49	223	1	...	273		
14	Moozuffernugger, Puttee Aboosaced ...	8	196	3	...	207		
15	Ditto, Puttee Syud Taha ...	...	73	7	...	80		
16	Ditto, ditto Awuz Alea ...	2	120	5	...	125		
17	Ditto, ditto Nusroolla Khan ...	1	30	...	...	31		
18	Ditto, ditto Wujh-ood deen ...	5	58	2	...	65		
19	Mimlana ...	76	191	...	12	279		
	Total, Chuk Moozuffernugger	770	4,707	264	77	5,818	...	...
1	Kharee Chuk Jansuth ...	37	223	13	...	273	2 8 11½	1 12 8
1	Bijoopoor Chuk Chuppai ...	110	114	1	...	225	3 12 1½	2 0 8½
1	Kookra ...	145	623	88	...	856	4 12 4	2 11 4½
1	Dutyana ...	494	575	33	9	1,111	2 14 2	2 1 9½
1	Tigree ...	18	134	...	97	249	2 3 2	1 11 4
2	Beeharee, Puttee Puhar Khan	5	143	...	...	148	2 14 2	2 0 8½
1	Ditto, Punj Puttee ...	6	461	4	15	486		
3	Bheemdour ...	39	60	1	...	100		
4	Bheekce ...	3	260	...	...	263		
5	Jut Mirjhara ...	38	59	5	19	121		
6	Dundhara ...	18	293	...	29	340		
7	Nerana ...	20	296	...	2	318		
8	Humayunpore ...	...	37	...	...	37		
9	Yusufpore ...	10	282	7	...	299		
10	Sulaj-ood-doe ...	10	55	...	...	65	2 14 2	2 11 2½
	Total, Chuk Goorh	149	1,946	17	65	2,177	...	...
1	Jilmaspore ...	112	243	23	...	383	2 14 2	2 11 2½
2	Bujharee ...	183	144	143	...	470	2 14 2	2 11 2½
3	Budheree ...	162	428	11	...	601	2 14 2	2 11 2½
4	Bilasore ...	236	443	7	...	686	2 14 2	2 11 2½
5	Bunnee, alias Bhaghonwalce	273	427	19	6	725	2 14 2	2 11 2½
6	Puchenda Kulan ...	170	632	81	3	936	2 14 2	2 11 2½
7	Surwat ...	73	945	211	78	1,307	2 14 2	2 11 2½
8	Moostufabad ...	221	401	49	...	671	2 14 2	2 11 2½
9	Mukhyalee ...	172	551	52	20	795	2 14 2	2 11 2½
10	Medpore ...	51	122	...	46	219	2 14 2	2 11 2½
11	Megahkharee ...	208	650	...	7	865	2 14 2	2 11 2½
12	Nusseerpore ...	29	479	81	...	589	2 14 2	2 11 2½
	Total, Chuk Puchenda Kulan	1,890	5,515	682	160	8,247	...	...
	GRAND TOTAL	3,613	13,837	1,098	408	18,956	...	...

MOOZUFFERNUGGER.

operation of the Ganges Canal.—(Continued.)

4.		5.				
IRRIGATED ACRE.		REVENUE ON IRRIGATED AREA.				
Dakur.	Bhoor.	Meesun.	Roslea.	Dakur.	Bhoor.	Total.
Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
1 14 0	0 14 11½	28 5 0	46 7 0	1 14 0	...	76 10 0
		48 2 0	663 2 0	46 14 0	14 15 0	773 1 0
		36 13 0	424 5 0	...	...	461 2 0
		271 14 0	231 6 0	37 8 0	7 8 0	608 4 0
		82 2 0	525 13 0	5 10 0	26 3 0	639 12 0
		254 14 0	699 0 0	22 8 0	3 12 0	980 2 0
		68 0 0	956 11 0	9 6 0	3 12 0	1,037 13 0
		430 8 0	1,753 2 0	142 8 0	2 13 0	2,304 15 0
		56 10 0	523 2 0	86 4 0	...	656 0 0
		107 10 0	982 0 0	58 2 0	...	1,147 12 0
		155 12 0	407 9 0	39 6 0	1 14 0	604 9 0
		240 12 0	789 13 0	15 0 0	...	1,045 9 0
		138 13 0	470 15 0	1 14 0	...	611 10 0
		22 11 0	413 14 0	5 10 0	...	442 3 0
		...	154 2 0	13 2 0	...	167 4 0
		5 11 0	253 7 0	5 10 0	...	264 12 0
		2 13 0	63 6 0	...	...	66 3 0
		14 3 0	122 8 0	3 12 0	...	140 7 0
		215 4 0	403 6 0	...	11 4 0	629 14 0
...	...	2,180 13 0	9,940 0 0	495 0 0	72 1 0	12,687 14 0
1 10 6½	...	94 10 0	399 9 0	21 9 0	...	515 12 0
2 4 7½	...	413 6 0	233 1 0	2 5 0	...	648 12 0
2 7 4½	...	691 12 0	1,688 2 0	216 9 0	...	2,596 7 0
1 14 0	0 14 11½	1,425 9 0	1,214 5 0	61 14 0	8 7 0	2,710 3 0
...	1 8 7½	39 9 0	228 15 0	...	149 5 0	417 13 0
		14 7 0	292 8 0	...	...	306 15 0
		17 5 0	943 0 0	7 7 0	19 10 0	987 6 0
		112 9 0	122 12 0	1 14 0	...	237 3 0
		8 11 0	531 14 0	...	...	540 9 0
1 13 9½	1 4 11	109 10 0	120 11 0	9 5 0	24 14 0	264 8 0
		51 15 0	599 6 0	...	37 15 0	689 4 0
		57 11 0	605 8 0	...	2 10 0	665 13 0
		...	75 11 0	...	...	75 11 0
1 13 9½	1 4 11	28 14 0	576 14 0	13 0 0	...	618 12 0
		28 14 0	148 8 0	...	...	177 6 0
...	...	430 0 0	4,016 12 0	31 10 0	85 1 0	4,563 7 0
1 6 3½	1 1 0½	323 3 0	656 2 0	39 0 0	...	1,018 5 0
1 6 3½	1 1 0½	528 2 0	368 13 0	199 3 0	...	1,116 2 0
1 6 3½	1 1 0½	467 8 0	1,155 11 0	15 5 0	...	1,638 8 0
1 6 3½	1 1 0½	681 0 0	1,196 3 0	9 12 0	...	1,886 15 0
1 6 3½	1 6 3½	787 13 0	1,153 0 0	26 7 0	8 6 0	1,975 10 0
1 6 3½	0 14 11½	490 9 0	1,841 8 0	112 13 0	2 13 0	2,147 11 0
1 6 3½	2 11 2½	210 10 0	2,551 11 0	293 14 0	210 7 0	3,266 10 0
1 6 3½	...	637 12 0	1,082 12 0	68 4 0	...	1,738 12 0
1 6 3½	1 6 3	496 5 0	1,487 13 0	72 7 0	27 13 0	2,084 6 0
1 6 3½	1 1 0½	147 3 0	329 7 0	...	48 15 0	525 9 0
1 6 3½	1 1 0½	600 4 0	1,753 2 0	...	7 7 0	2,362 13 0
1 6 3½	1 1 0½	83 11 0	1,293 6 0	112 3 0	...	1,489 14 0
...	...	5,454 0 0	14,891 8 0	949 14 0	305 13 0	21,601 3 0
...	...	10,729 11 0	32,612 4 0	1,778 13 0	620 11 0	45,741 7 0

PERGUNNA H

Statement showing profits due to the

1. Number.	2. Name of Mouzah.	6. REVENUE RATE PER UNIRRIGATED ACRE.				REVENUE	
		Meesun.	Roslee.	Dakur.	Bhoor.	Meesun.	Roslee.
		Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
1	Budheewala ...					13 13 0	30 6 0
2	Bummunharee ...					23 8 0	433 14 0
3	Beeheepore ...					17 15 0	277 12 0
4	Puchenda Khoord ...					132 10 0	190 11 0
5	Chandpore ...					40 1 0	344 1 0
6	Rampore ...					124 6 0	457 6 0
7	Ralee ...					33 2 0	626 4 0
8	Slaona ...					210 0 0	1,151 1 0
9	Sojroo ...					27 10 0	335 13 0
10	Shahb-ood-deen-pore ...	1 6 1½	1 6 1½	1 4 2	0 14 4½	52 8 0	642 9 0
11	Shairpore ...					76 0 0	258 11 0
12	Shairnugger ...					117 7 0	516 13 0
13	Mirzapore ...					67 11 0	308 2 0
14	Mooruffernugger, Puttee Aboosseed ...					11 1 0	270 13 0
15	Ditto, Puttee Syud Taha ...					...	100 14 0
16	Ditto, ditto Awuz Aleo ...					2 12 0	165 13 0
17	Ditto, di to Nusroolla Khan ...					1 6 0	41 7 0
18	Ditto, ditto Wujh-ood-dee ...					6 15 0	50 2 0
19	Mimiana ...					105 0 0	263 14 0
	Total, Chuk Mooruffernugger ...	...	...	...	...	1,063 13 0	6,504 6 0
1	Kharee Chuk Jansuth ...	1 3 9½	1 3 9½	1 1 0	...	45 13 0	275 14 0
1	Bljooopoora Chuk Chuprai ...	1 7 5½	1 7 5½	1 11 0	...	161 2 0	167 0 0
1	Kookra ...	2 2 4½	2 2 4½	2 4 8½	...	311 8 0	1,338 8 0
1	Dutyana ...	1 7 5½	1 7 5½	1 5 4	0 15 0	724 15 0	843 12 0
1	Tigree ...	1 3 10½	1 3 10½	...	0 10 6½	23 6 0	166 7 0
1	Beeharee, Puttee Puhar Khan ...					7 5 0	209 13 0
2	Ditto, Punj Puttee ...					8 13 0	676 8 0
3	Bheemdoor ...					57 4 0	88 1 0
4	Bheekoo ...					4 6 0	381 9 0
5	Jut Mirjhara ...	1 7 5½	1 7 5½	1 5 4	0 15 0	55 12 0	86 9 0
6	Dundhara ...					26 7 0	429 15 0
7	Nerana ...					29 6 0	434 6 0
8	Humayunpore ...					...	54 5 0
9	Yusufpore ...					14 11 0	413 13 0
10	Sulaj-ood-dec ...					14 11 0	80 11 0
	Total Chuk Goorh ...	...	...	...	...	218 11 0	2,855 10 0
1	Jilmaspore ...	1 7 5½	1 7 5½	1 5 4	...	164 5 0	356 0 0
2	Bujharee ...	1 7 5½	1 7 5½	1 5 4	...	268 8 0	211 4 0
3	Budheree ...	1 7 5½	1 7 5½	1 5 4	...	237 11 0	628 0 0
4	Bilaspore ...	1 7 5½	1 7 5½	1 5 4	...	346 14 0	650 0 0
5	Bunnee alias Bhaghonwalee ...	1 7 5½	1 7 5½	1 5 4	1 1 0½	400 9 0	626 9 0
6	Puchenda Kulan ...	1 7 5½	1 7 5½	1 5 4	0 13 0	249 0 0	1,000 11 0
7	Surwut ...	1 7 5½	1 7 5½	1 5 4	1 1 0½	107 2 0	1,386 10 0
8	Moostufabad ...	1 7 5½	1 7 5½	1 5 4	...	324 4 0	588 6 0
9	Mukhyalee ...	1 7 5½	1 7 5½	1 5 4	1 1 0½	252 6 0	808 8 0
10	Medpore ...	1 7 5½	1 7 5½	1 5 4	0 15 0	74 13 0	179 0 0
11	Megahkharee ...	1 7 5½	1 7 5½	1 5 4	0 15 0	305 3 0	953 12 0
12	Nu:seerpore ...	1 7 5½	1 7 5½	1 5 4	0 15 0	42 9 0	702 13 0
	Total, Chuk Puchenda Kulan ...	...	...	...	...	2,773 4 0	8,091 9 0
	GRAND TOTAL ...	...	...	...	...	5,321 8 0	30,243 2 0

MOOZUFFERNUGGER.

operation of the Ganges Canal.—(Continued.)

7.			8.	9.	10.				
ON UNIRRIGATED AREA.			Difference of revenue between irrigated and unirrigated rates.	Number of wells closed by canal.	TWENTY-TWO ACRES ALLOWED TO EACH WELL.				
Dakur.	Bhoor.	Total.			Meesun.	Roslee.	Dakur.	Bhoor.	Total.
Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.						
1 4 0	...	45 7 0	31 3 0	...	...	...	...	...	...
31 8 0	14 6 0	503 4 0	269 13 0	1	1	19	1	1	22
...	...	295 11 0	165 7 0	...	...	...	...	...	...
25 3 0	7 3 0	355 11 0	252 9 0	...	...	...	...	...	...
3 12 0	25 3 0	413 1 0	226 11 0	1	2	19	...	2	22
15 2 0	3 10 0	600 8 0	379 10 0	...	...	...	...	...	...
6 5 0	3 10 0	679 5 0	368 8 0	...	...	...	...	...	...
95 12 0	2 11 0	1,459 8 0	875 7 0	...	...	...	...	...	...
57 15 0	...	421 6 0	234 10 0	...	...	...	...	...	...
39 1 0	...	734 2 0	413 10 0	2	8	96	6	...	110
26 7 0	1 13 0	370 15 0	233 10 0	2	18	62	7	1	88
10 1 0	...	644 5 0	401 4 0	...	...	...	...	...	...
1 4 0	...	377 1 0	234 9 0	...	...	...	...	...	...
...
3 12 0	...	285 10 0	156 9 0	...	...	...	...	...	...
8 13 0	...	109 11 0	57 9 0	...	...	...	...	...	...
3 12 0	...	172 5 0	92 7 0	...	...	...	...	...	...
...	...	42 13 0	23 6 0	...	...	...	...	...	...
2 8 0	...	89 9 0	50 14 0	...	...	...	...	...	...
...	10 12 0	379 10 0	250 4 0	...	...	...	...	...	...
332 7 0	69 4 0	7,969 14 0	4,718 0 0	6	29	195	14	4	242
13 13 0	...	335 8 0	180 4 0	...	...	...	...	...	...
1 11 0	...	329 13 0	318 15 0	...	...	...	...	...	...
...
201 14 0	...	1,851 14 0	744 9 0	2	8	32	4	...	44
44 0 0	8 7 0	1,621 2 0	1,089 1 0	...	...	...	...	...	...
...	63 14 0	252 11 0	165 2 0	...	...	...	...	...	...
...	...	217 2 0	89 13 0	...	...	...	...	...	...
5 5 0	14 1 0	704 11 0	282 11 0	...	...	...	...	...	...
2 5 0	...	146 10 0	90 9 0	1	9	13	...	...	22
...	...	385 15 0	154 10 0	...	...	...	...	...	...
6 11 0	17 13 0	166 13 0	97 11 0	...	...	...	...	...	...
...	27 3 0	483 9 0	205 11 0	...	...	...	...	...	...
...	1 14 0	465 10 0	200 3 0	...	...	...	...	...	...
...	...	54 5 0	21 6 0	1	...	22	...	...	22
9 5 0	...	437 13 0	180 15 0	...	...	...	...	...	...
...	...	95 6 0	82 0 0	...	...	...	...	...	...
22 10 0	60 15 0	3,157 14 0	1,405 9 0	2	9	35	...	...	44
37 5 0	...	557 10 0	460 11 0	...	...	...	...	...	...
190 10 0	...	670 6 0	445 12 0	1	17	14	13	...	44
14 11 0	...	880 6 0	758 2 0	...	...	...	...	...	...
9 5 0	...	1,006 3 0	880 12 0	...	...	...	...	...	...
25 5 0	6 6 0	1,058 13 0	916 13 0	2	17	26	1	...	44
108 0 0	2 7 0	1,360 2 0	1,087 9 0	2	8	32	4	...	44
281 4 0	83 0 0	1,858 0 0	1,408 10 0	...	...	...	...	...	...
65 5 0	...	977 5 0	810 13 0	1	29	53	6	...	88
69 5 0	42 9 0	1,172 12 0	911 10 0	...	...	...	...	...	...
...	43 2 0	296 15 0	228 10 0	1	5	12	...	5	22
...	6 9 0	1,265 8 0	1,097 5 0	1	5	17	...	...	22
...	...	745 6 0	744 8 0	...	...	...	...	...	...
801 2 0	184 1 0	11,850 0 0	9,751 3 0	8	52	101	18	5	176
1,417 9 0	386 9 0	27,368 12 0	18,372 11 0	18	98	363	36	9	506

PERGUNNAH

Statement showing profits due to the

1. Number.	2. Name of Mouzah.	11.				
		REVENUE DERIVABLE FROM WELL IRRIGATION.				
		Meesun.	Roslee.	Dakur.	Bhoor.	Total.
		Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
1	Budheewala ...	...	...	...	...	...
2	Bummunharee ...	2 13 0	40 2 0	1 14 0	0 15 0	45 2 0
3	Beebeepore ...	...	...	...	...	...
4	Puchenda Khoord ...	...	...	...	...	...
5	Chandpore ...	5 11 0	33 0 0	...	1 14 0	45 9 0
6	Rampore ...	...	...	...	...	...
7	Raies ...	...	...	...	...	...
8	Sjaons ...	...	...	...	...	...
9	Sajroo ...	...	...	...	...	...
10	Shahb-ood deen-pore ...	22 10 0	209 12 0	11 4 0	...	236 10 0
11	Shahpore ...	51 0 0	130 15 0	13 2 0	0 15 0	196 0 0
12	Shahrnugger ...	...	...	...	...	...
13	Mirzapore ...	...	...	...	...	...
14	Mooruffernugger, Puttee Abocanerd ...	...	...	...	...	...
15	Ditto, Puttee Syud Taha ...	...	...	...	...	...
16	Ditto, ditto Awaz Alea ...	...	...	...	...	...
17	Ditto, ditto Nasroolla Khan ...	...	...	...	...	...
18	Ditto, ditto Wujh-ood-dee ...	...	...	...	...	...
19	Mimlana ...	...	...	...	...	...
	Total, Chuk Mooruffernugger ...	82 2 0	411 13 0	26 4 0	3 12 0	523 15 0
1	Kharee Chuk Jansuth ...	...	...	...	...	...
1	Bijoopoora Chuk Chuppal ...	...	...	...	...	...
1	Kookra ...	39 3 0	86 11 0	9 13 0	...	134 11 0
1	Dutyana ...	...	...	...	...	...
1	Tigree ...	...	...	...	...	...
1	Rehmaree, Puttee Puhar Khan ...	...	...	...	...	...
2	Ditto, Punj Puttee ...	...	...	...	...	...
3	Bheemdoor ...	26 0 0	26 9 0	...	...	52 9 0
4	Bheekce ...	...	...	...	...	...
5	Jot Mirjhara ...	...	...	...	...	...
6	Dundhara ...	...	...	...	...	...
7	Nerana ...	...	...	...	...	...
8	Humayunpore ...	...	45 0 0	...	...	45 0 0
9	Yusufpore ...	...	...	...	...	...
10	Sulaj ood-dee ...	...	...	...	...	...
	Total, Chuk G.oorh ...	26 0 0	71 9 0	...	...	97 9 0
1	Jilmaspore ...	...	...	...	...	...
2	Bujharee ...	49 1 0	37 13 0	18 2 0	...	105 0 0
3	Budharee ...	...	...	...	...	...
4	Bilasore ...	...	...	...	...	...
5	Bunnee, alias Bhaghowalee ...	49 1 0	70 4 0	1 6 0	...	120 11 0
6	Puchenda Kulaa ...	23 1 0	86 6 0	5 9 0	...	115 0 0
7	Sarwat ...	...	...	...	...	...
8	Moostufabad ...	83 11 0	143 0 0	8 6 0	...	235 1 0
9	Mukhyalee ...	...	...	...	...	...
10	Medpore ...	14 7 0	32 6 0	...	5 5 0	52 2 0
11	Megahkharee ...	14 7 0	45 14 0	...	...	60 5 0
12	Nuasarpore ...	...	...	...	...	...
	Total, Chuk Puchenda Kulaa ...	233 12 0	415 11 0	33 7 0	5 5 0	688 3 0
	GRAND TOTAL ...	380 1 0	985 12 0	69 8 0	9 1 0	1,444 6 0

MOOZUFFERNUGGER.

operation of the Ganges Canal.—(Concluded.)

12.					13.	14.	15.
REVENUE ON WELL IRRIGATED AREA BY DRY RATES.					Difference of revenue on area irrigated by wells.	Actual profits due to canal.	Remarks.
Meesun.	Roalee.	Dakur.	Bhoor.	Total.			
Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	
...	...	...	...	...	...	31 3 0	
1 6 0	26 4 0	1 4 0	0 14 0	29 12 0	16 0 0	253 13 0	
...	...	...	...	...	...	165 7 0	
...	...	...	...	...	...	252 9 0	
2 12 0	24 14 0	...	1 13 0	29 7 0	16 2 0	210 9 0	
...	...	...	...	...	...	379 10 0	
...	...	...	...	...	...	368 8 0	
...	...	...	...	...	...	875 7 0	
...	...	...	...	...	...	234 10 0	
11 1 0	132 11 0	7 9 0	...	151 5 0	85 5 0	328 5 0	
24 14 0	85 11 0	8 13 0	0 14 0	120 4 0	75 12 0	157 14 0	
...	...	...	...	...	...	401 4 0	
...	...	...	...	...	...	234 9 0	
...	...	...	...	...	...	156 9 0	
...	...	...	...	...	...	57 9 0	
...	...	...	...	...	...	92 7 0	
...	...	...	...	...	...	23 6 0	
...	...	...	...	...	...	50 14 0	
...	...	...	...	...	...	250 4 0	
40 1 0	269 8 0	17 10 0	3 9 0	330 12 0	193 3 0	4,524 13 0	
...	...	...	...	...	...	180 4 0	
...	...	...	...	...	...	318 15 0	
17 3 0	68 12 0	9 3 0	...	95 2 0	39 9 0	705 0 0	
...	...	...	...	...	...	1,089 1 0	
...	...	...	...	...	...	165 2 0	
...	...	...	...	...	...	89 13 0	
...	...	...	...	...	...	282 11 0	
13 3 0	19 1 0	...	...	32 4 0	20 5 0	70 4 0	
...	...	...	...	...	...	154 10 0	
...	...	...	...	...	...	97 11 0	
...	...	...	...	...	...	205 11 0	
...	...	...	...	...	...	200 3 0	
...	32 5 0	...	...	32 5 0	12 11 0	8 11 0	
...	...	...	...	...	...	180 15 0	
...	...	...	...	...	...	82 0 0	
13 3 0	51 6 0	...	...	64 9 0	33 0 0	1,372 9 0	
...	...	...	...	...	...	460 11 0	
24 15 0	20 9 0	17 5 0	...	62 13 0	42 3 0	403 9 0	
...	...	...	...	...	...	758 2 0	
...	...	...	...	...	...	880 12 0	
24 15 0	38 2 0	1 5 0	...	64 6 0	56 5 0	860 8 0	
11 12 0	46 15 0	5 5 0	...	64 0 0	51 0 0	1,036 9 0	
...	...	...	...	...	...	1,408 10 0	
42 9 0	77 13 0	8 0 0	...	128 6 0	106 11 0	704 2 0	
...	...	...	...	...	...	911 10 0	
7 5 0	17 10 0	...	4 11 0	29 10 0	22 8 0	206 2 0	
7 5 0	24 15 0	...	...	32 4 0	28 1 0	1,079 4 0	
...	...	...	...	...	...	744 8 0	
118 13 0	226 0 0	31 15 0	4 11 0	381 7 0	306 12 0	9,444 7 0	
189 4 0	615 10 0	58 12 0	8 4 0	871 14 0	572 8 0	17,800 3 0	

8,830 allowed as profits of canal in the entire pergunnah.

S. N. MARTIN,
Collector.

Abstract of Statement A.
B.

No.	Pergunnah.	Name of Mousah.	Area irrigated by Canal.	Difference of Revenue between irrigated and unirrigated rates.	Difference of Revenue on area irrigated by wells.	Actual profits due to Canal.	Remarks.
1	MOOSUFFERNUGGER.	Badheewala ...					Rs. 30 allowed.
2		Bummunharee ...					Rs. 150 ditto.
3		Beebeepore ...					Rs. 100 ditto.
4		Puchenda Khoord ...					Rs. 50 only allowed.
5		Chundpore ...					Rs. 200 allowed.
6		Rampore ...					Rs. 250 ditto.
7		Raie ...					Rs. 270 ditto.
8		Sisona ...					Rs. 400 ditto.
9		Soojroo ...					Rs. 140 ditto.
10		Shabhooddeenore ...					Rs. 200 ditto.
11		Shairpore ...					No deduction necessary; assessment irrespective of canal.
12		Shairnuggur ...					Rs. 200 allowed for canal profit.
13		Mirzapore ...					Rs. 100 ditto. ditto.
14		Moosuffernugger, Puttee Aboosaeed ...					Rs. 40 ditto ditto.
15		Ditto, Puttee Syud Taha,					Rs. 60 ditto ditto.
16		Ditto, Ditto Awuz Ali,					Rs. 60 ditto ditto.
17		Ditto, Ditto Nasroolla Khan ...					No deduction necessary, canal irrigation limited.
18		Ditto, Ditto Wujhooddeen,					Rs. 40 allowed.
19		Mimlana ...					Rs. 150 ditto.
		Total, Chuk Moosuffernuggur ...					
1		Kharee (Chuk Jansuth),					Rs. 80 allowed for canal profits.
1		Bijoopora (Chuk Chuppar) ...					Rs. 200 allowed.
1		Kookra ...					Rs. 300 ditto.
1		Dutyana ...					Rs. 400 only allowed.
1		Tigree ...					Rs. 100 allowed.
1		Biharee, Puttee Puhar Khan ...					Rs. 70 ditto.
2		Ditto, Punj Puttee ...					Rs. 300 ditto.
3		Bhundour ...					Rs. 50 ditto.
4		Bheekce ...					Rs. 155 ditto.
5		Jut Mujhara ...					Rs. 60 ditto.
6		Dhundhera ...					No deduction necessary; assessment irrespective of canal.
7		Nerana ...					Rs. 200 allowed.
8		Homayonpore ...					No deduction necessary, canal irrigation being a mere trifle.
9		Yosufpore ...					Rs. 100 allowed.
10		Sullajooddee ...					Rs. 80 ditto.
		Total, Chuk Goorh ...	2,177	1,406	33	1,373	

Abstract of Statement A.—(Concluded.)

B.

No.	Pergunnah.	Name of Mousah.	Area irrigated by Canal.	Difference of Revenue between irrigated and unirrigated rates.	Difference of Revenue on area irrigated by wells.	Actual profits due to Canal.	Remarks.
			Rs.	Rs.	Rs.	Rs.	
1	Mozuffernugger—(Concluded.)	Ilmaspore ...	383	461	...	461	Allowed Rs. 150 only; no kutchas wells to be seen.
2		Bijharee ...	470	446	42	404	Rs. 400 allowed.
3		Budheree ...	601	758	...	758	Rs. 400 Ditto.
4		Bilaspore ...	686	881	...	881	It is difficult to say what to allow where there are no kutchas wells—say Rs. 600.
5		Bunee, alias Baghorwalee,	725	916	191	860	Rs. 300 allowed for canal profits.
6		Puchenda Kulan ...	936	1,067	51	1,036	Rs. 600 allowed.
7		Surwut ...	1,307	1,409	...	1,409	Rs. 400 only allowed.
8		Moostufabad ...	671	811	107	704	Rs. 400 ditto. The pukka wells on this estate cost Rs. 2,200 and 1,500.
9		Mukhyalee ...	795	912	...	912	Rs. 400 allowed.
10		Medpore ...	219	329	23	306	Rs. 50 only allowed.
11		Megahkharee ...	865	1,097	23	1,069	Rs. 400 allowed.
12		Nusseerpore ...	888	744	...	744	Rs. 200 ditto.
		Total, Chuk Puchenda Kulan ...	8,247	9,751	1,504	9,444	
		GRAND TOTAL ...	18,956	18,373	573	17,800	{ Rs. 8,830 allowed as profits of canal in the entire pergunnah. This is not much, surely.

Water in this pergunnah is distant twenty feet, and kutchas wells are not known. Mr. Thornton distinctly mentions this in his Settlement Report, and I have myself been all over the pergunnah. I can certify that kutchas wells are not feasible.

I have had a kutchas well dug in my presence: water appeared at twenty feet in a sandy substrata not fit for irrigation. The same results have been obtained at Surwut, about a mile from Mozuffernugger.

In proof of the correctness of this estimate of canal profits, I would cite actual jummasbundeas taken from Lalla Oodey Ram's banking books for two years previous to introduction of Canal, and one year after canal in full play.

Mousah Budheree, Pergunnah Mozuffernugger.

		Rs.	As.	P.
1258 and 1260 Fnslee,	Average net rental	...	...	...
previous to canal.	Government demand	...	...	...
1266 Fnslee, after in-	Actual net rental by Mahajuns' books filed in office,	3,621	9	3
troduction of canal.	Government demand, including canal profits	1,900	0	0

Increase in rental by canal, Rs. 1,006, or Rs. 37-8-0 per cent.

Increase in Government demand, at the very lowest computation, 19 per cent., which would represent a fall of Rs. 361. I have allowed Rs. 400.

S. N. MARTIN,
Collector.

PERGUNNAH
Statement showing Profits due to

1.	2.	3.
Number.	Name of Mouzah.	AREA IRRIGATED
		Meesun. Roalee. Dakur.
1	Simbhalki	17 98 ...
2	Qootubpore	642 652 ...
	Total, Chuk Mozuffernugger	659 750 ...
1	Mahmoodpore Buhsanee	234 347 1
2	Bussehra Hossanpore	1,133 2,743 14
3	Bhooraharee	78 143 ...
4	Phulaoda (5 Biswas)	179 111 ...
5	Ditto (15 ditto)	541 206 ...
6	Tikola	108 98 23
7	Chupra	148 173 12
8	Chuppar	897 866 3
9	Khowaja Nugla	126 270 ...
10	Nugla Rutta	258 300 ...
11	Sulaimpore	116 57 22
12	Khoodda	320 677 4
13	Kolaharee	120 113 ...
14	Lukhmouttee	75 78 ...
15	Muhraipore	120 293 5
16	Huraintee	144 196 13
	Total, Chuk Chuppar	4,597 6,711 97
1	Puraee (Chuk Goorh)	154 278 45
2	Burla (Chuk Burla)	707 1,058 98
1	Kalawala (Chuk Ruzkoollapore)	3
1	Boocha	40 43 ...
2	Shukkurpore	108 18 ...
3	Nusroollahpore ... ..	... 3 ...
4	Noornuggur... ..	101 30 ...
	Total, Chuk Bhainswal Sikundurpore	249 94 ...
	Carried over	6,369 8,891 240

POOR.

the operation of the Ganges Canal.—(Continued.)

		4.			
BY CANAL.		REVENUE RATE PER IRRIGATED ACRE.			
Bhoor.	Total.	Meesun.	Roslee.	Dakur.	Bhoor.
		Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
...	115	} 2 4 3	1 11 0½	...	0 11 11½
9	1,303				
9	1,418
3	585	} 3 0 1½	1 10 1½	1 13 3½	1 0 8½
...	3,890				
...	291				
25	315				
16	763				
...	229				
...	338				
II	1,775				
...	396				
...	558				
4	239				
30	1,031				
...	293				
...	153				
III	437				
II	264				
117	11,522
7	494	2 4 11½	1 10 2½	1 7 9½	1 0 8½
...	1,663	3 14 7½	2 2 0½	2 6 1½	...
...	3	1 9 1½
9	92	} 1 13 3½	1 3 5	...	0 13 11½
...	126				
...	3				
...	181				
9	352
142	15,642

PERGUNNAH
Statement showing Profits due to

1. Number.	2. Name of Mouzah.	5.				
		REVENUE ON IRRIGATED AREA.				
		Mosun.	Boelee.	Dakur.	Winter.	Total.
		Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
1	Simbhalki	38 8 0	165 9 0	...	...	204 1 0
2	Qootubpore	1,454 8 0	1,101 8 0	...	6 12 0	2,562 12 0
	Total, Chuk Mosuffernugger	1,493 0 0	1,267 1 0	...	6 12 0	2,766 13 0
1	Mahmoodpore Buhaanee,	703 9 0	567 4 0	1 13 0	3 2 0	1,275 12 0
2	Bussehra Honsenpore ...	3,406 11 0	4,484 2 0	25 10 0	...	7,916 7 0
3	Bhooraharee	234 8 0	233 11 0	...	...	468 3 0
4	Phulaoda (5 Biswas) ...	532 4 0	181 7 0	...	26 2 0	745 13 0
5	Ditto (15 ditto)	1,626 11 0	336 12 0	...	16 12 0	1,980 3 0
6	Tikola	324 12 0	160 3 0	42 2 0	...	527 1 0
7	Chupra	444 15 0	282 12 0	22 0 0	...	749 11 0
8	Chuppar	2,697 2 0	1,415 11 0	5 8 0	9 6 0	4,127 11 0
9	Khowaja Nugla	378 13 0	441 6 0	...	...	820 3 0
10	Nugla Butta	775 12 0	490 7 0	...	...	1,266 3 0
11	Salainpore	348 13 0	158 3 0	40 5 0	4 3 0	551 8 0
12	Khodda	962 3 0	1,106 11 0	7 5 0	31 6 0	2,107 9 0
13	Kolaharee	360 13 0	184 11 0	...	...	545 8 0
14	Lukhmotee	225 8 0	127 8 0	...	...	353 0 0
15	Muhraipore	360 13 0	478 15 0	9 3 0	19 13 0	868 12 0
16	Huraintee	433 0 0	320 6 0	23 13 0	11 8 0	788 11 0
	Total, Chuk Chuppar ...	13,822 3 0	10,970 1 0	177 11 0	122 4 0	25,092 3 0
1	Pursee (Chuk Goorb) ...	355 8 0	455 0 0	67 0 0	7 5 0	884 13 0
2	Buria (Chuk Buria) ...	2,767 4 0	2,251 0 0	233 8 0	—	5,251 12 0
1	Kalawala (Chuk Buzkool- lapore)	4 11 0	...	...	...	4 11 0
1	Boocha... ..	73 4 0	65 10 0	—	7 13 0	146 11 0
2	Shukkurpore	197 14 0	27 8 0	...	...	225 6 0
3	Nusrullahpore ... ..	...	4 9 0	...	...	4 9 0
4	Noornugger	186 1 0	45 12 0	...	...	230 13 0
	Total, Chuk Bhainswal Sikundarpore ...	456 3 0	143 7 0	...	7 13 0	607 7 0
	Carried over ...	18,898 13 0	15,086 9 0	478 3 0	144 2 0	34,607 11 0

P O O R.—(Continued.)

the operation of the Ganges Canal.

6.				7.				
REVENUE RATE PER UNIRRIGATED ACRE.				REVENUE ON UNIRRIGATED AREA.				
Meesun.	Roslee.	Dakur.	Bhoor.	Meesun.	Roslee.	Dakur.	Bhoor.	Total.
Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
} 1 1 8½	1 1 8½	...	0 11 6	18 13 0	108 5 0	...	...	127 2 0
				709 11 0	720 12 0	...	6 8 0	1,436 15 0
...	...	...	...	728 8 0	829 1 0	...	6 8 0	1,564 1 0
} 1 2 9	1 2 9	1 5 0	0 12 0	274 3 0	406 10 0	1 5 0	2 4 0	684 6 0
				1,327 11 0	3,214 7 0	18 6 0	...	4,560 8 0
				91 7 0	167 7 0	...	...	259 0 0
				209 12 0	130 1 0	...	18 12 0	358 9 0
				634 0 0	241 7 0	...	12 0 0	887 7 0
				126 9 0	114 14 0	30 3 0	...	271 10 0
				173 7 0	202 12 0	15 12 0	...	391 15 0
				1,051 3 0	1,014 13 0	3 15 0	6 12 0	2,076 11 0
				147 4 0	316 7 0	...	...	463 11 0
				302 6 0	351 9 0	...	...	653 15 0
				135 15 0	113 11 0	28 14 0	3 0 0	281 8 0
				375 0 0	793 5 0	5 4 0	22 8 0	1,196 1 0
				140 10 0	132 7 0	...	...	273 1 0
				87 14 0	91 6 0	...	...	179 4 0
				140 10 0	343 5 0	6 9 0	14 4 0	504 12 0
				168 12 0	229 11 0	17 1 0	8 4 0	423 12 0
...	...	...	...	5,386 11 0	7,864 6 0	127 5 0	87 12 0	13,466 2 0
1 2 9½	1 2 9½	1 1 0½	0 12 0	180 12 0	326 5 0	48 0 0	5 4 0	560 5 0
1 2 9	1 2 9	1 4 0	...	828 8 0	1,239 13 0	122 8 0	...	2,190 13 0
0 12 1	...	...	...	2 4 0	...	...	...	2 4 0
} 1 1 6	1 1 0	...	0 10 0	43 12 0	47 9 0	...	5 10 0	96 6 0
				118 2 0	19 11 0	...	...	137 13 0
				...	3 5 0	...	...	3 5 0
				110 7 0	32 13 0	...	...	143 4 0
...	...	...	...	272 5 0	102 13 0	...	5 10 0	380 12 0
...	...	...	...	7,399 0 0	10,362 6 0	297 13 0	105 2 0	18,164 5 0

P O O R.—(Continued.)

the operation of the Ganges Canal.

DERIVABLE IRRIGATION.			12.					13.	14.	15.
Dakur.	Bhoor.	Total.	REVENUE ON WELL-IRRIGATED AREA BY DRY RATES.					Difference of Revenue on area irrigated by wells.	Actual profits due to Canal.	Remarks.
			Meesun.	Roslee.	Dakur.	Bhoor.	Total.			
...	Ra. As. P.	
...	76 15 0	
...	1,125 13 0	
...	1,202 12 0	
...	591 6 0	
...	3,355 15 0	
...	209 3 0	
...	387 4 0	
...	1,092 12 0	
...	255 7 0	
...	357 12 0	
...	2,051 0 0	
...	356 8 0	
...	612 4 0	
...	270 0 0	
...	911 8 0	
...	272 7 0	
...	173 12 0	
...	364 0 0	
...	364 15 0	
...	11,626 1 0	
...	324 8 0	
...	3,060 15 0	
...	2 7 0	
...	50 5 0	
...	87 9 0	
...	1 4 0	
...	87 9 0	
...	226 11 0	
...	16,448 6 0	

PERGUNNAH
Statement showing Profits due to

1.	2.	3.				
No.	Name of Mouzah.	AREA IRRIGATED BY CANAL.				
		Meesun.	Roslee.	Dakur.	Bhoor.	Total.
	Brought over ...	6,369	8,891	240	142	15,642
1	Bhainsurharee	118	291	4	26	439
2	Bhumyaoree	20	144	1	...	165
3	Bhojaharee	120	235	...	11	366
4	Poor	311	336	3	26	676
5	Taijulhara	415	522	17	33	977
6	Tajpore	187	233	8	6	434
7	Raipore Jhoja	13	185	15	9	222
8	Simurtee	107	241	3	...	351
9	Sooharee... ..	...	258	...	...	258
10	Shahjehanpore	49	87	...	2	138
11	Abdoolapore ... ..	...	153	...	...	153
12	Qasumpore	92	432	...	1	525
13	Kailanpore Jelalpore	120	307	...	...	427
14	Khankaree	571	720	4	...	1,295
15	Khindurya	127	299	30	8	464
16	Goonaotee	128	183	1	...	302
17	Mandla	104	91	3	...	198
18	Nohpore ... ..	...	207	...	...	207
	Total, Chuk Poor ...	2,472	4,924	89	112	7,597
1	Buhlalpore	36	168	...	...	204
2	Chuppurpore ... ..	...	49	...	...	49
3	Dhumat Bangar	116	268	...	43	427
4	Doodhlee	84	211	...	...	295
5	Tooghluqpore	240	436	5	...	681
6	Kumbhara	176	182	15	...	373
7	Godhna Godhnee	235	312	...	1	548
8	Mirzapore Shahjehanpore ... ..	...	19	...	...	19
9	Nugla Mehrdad	36	153	1	...	190
	Total, Chuk Birhmpore ...	923	1,798	21	44	2,786
	GRAND TOTAL ...	9,764	15,613	350	298	26,025

P O O R.—(Continued.)

the operation of the Ganges Canal.

4.				5.				
REVENUE RATE PER IRRIGATED ACRE.				REVENUE ON IRRIGATED AREA.				
Meesun.	Roslee.	Dakur.	Bhoor.	Meesun.	Roslee.	Dakur.	Bhoor.	Total.
Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
...	18,898 13 0	15,086 9 0	478 3 0	144 2 0	34,607 11 0
				370 4 0	456 10 0	6 10 0	27 3 0	860 11 0
				62 12 0	225 15 0	1 10 0	...	290 5 0
				376 8 0	368 12 0	...	11 8 0	756 12 0
				975 13 0	527 4 0	4 15 0	27 3 0	1,535 3 0
				1,302 2 0	819 10 0	28 1 0	24 1 0	2,173 14 0
				586 12 0	365 10 0	13 3 0	6 4 0	971 13 0
				40 13 0	290 4 0	24 13 0	9 6 0	365 4 0
				335 12 0	378 3 0	4 15 0	...	718 14 0
				...	404 14 0	...	...	404 14 0
				153 12 0	136 8 0	...	2 1 0	292 5 0
				...	240 2 0	...	...	240 2 0
				288 11 0	677 15 0	...	1 1 0	967 11 0
				376 8 0	481 12 0	...	...	858 4 0
				1,791 10 0	1,129 15 0	6 10 0	...	2,928 3 0
				398 8 0	469 4 0	49 9 0	8 6 0	925 11 0
				370 4 0	287 3 0	1 10 0	...	659 1 0
				326 5 0	142 13 0	4 15 0	...	474 1 0
				...	324 14 0	...	...	324 14 0
				7,756 6 0	7,727 8 0	146 15 0	117 1 0	15,747 14 0
				94 2 0	283 0 0	...	...	377 5 0
				...	82 9 0	...	...	82 9 0
				303 6 0	451 12 0	...	32 13 0	787 15 0
				219 11 0	355 10 0	...	...	575 5 0
				627 11 0	734 14 0	9 10 0	...	1,372 3 0
				460 5 0	306 12 0	28 12 0	...	795 13 0
				614 9 0	525 14 0	...	0 12 0	1,141 3 0
				...	32 0 0	...	...	32 0 0
				94 2 0	257 14 0	1 15 0	...	353 15 0
...	2,413 14 0	3,030 8 0	40 5 0	33 9 0	5,518 4 0
...	29,069 1 0	25,844 9 0	665 7 0	294 12 0	55,873 13 0

PERGUNJ

Statement showing Profits due

1.	2.			6.				
Name of Mouzah.				REVENUE RATE PER UNIRRIGATED ACRE.				Me
				Meesun.	Roslee.	Dakur.	Bhoor.	
				Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	
Brought over	7,39'
urharee					13
'aoree					2
aree					
...					
lafa					
e					
e Jhoja					
ee					
ree...					
hanpore					
llapore					
lure					
pore Jelalpore					
aree					
urya					
otee					
la					
'e					
Total, Chuk Poor					
pore					
urpore					
t Bangar					
ee					
agpore					
ra					
, Godhnee					
ore, Shahjahanpore					
Mehrdad					
Total, Chuk Birkhpore					
GRAND TOTAL					

POOR.—(Continued.)

operation of the Ganges Canal.

7.				8.	9.
REVENUE ON UNIRRIGATED AREA.				Difference of Revenue between irrigated and unirrigated rates.	Number of wells closed by Canal.
Roslee.	Dakur.	Bhoor.	Total.		
Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	
10,362 6 0	297 13 0	105 2 0	18,164 5 0	16,443 6 0	...
327 6 0	4 12 0	19 8 0	484 6 0	376 5 0	...
162 0 0	1 8 0	...	165 11 0	104 10 0	...
264 6 0	...	8 4 0	407 10 0	349 2 0	...
378 0 0	3 9 0	19 8 0	750 15 0	784 4 0	...
587 4 0	20 3 0	17 4 0	1,091 9 0	1,083 5 0	...
262 0 0	9 8 0	4 8 0	486 6 0	485 7 0	...
208 2 0	17 13 0	6 12 0	247 5 0	117 16 0	...
271 2 0	3 9 0	...	395 1 0	833 13 0	...
290 4 0	...	...	290 4 0	114 10 0	—
97 14 0	...	1 8 0	154 8 0	137 13 0	...
172 2 0	...	...	172 2 0	68 0 0	...
486 0 0	...	0 12 0	590 4 0	377 7 0	...
345 6 0	...	...	480 6 0	377 14 0	...
810 0 0	4 12 0	...	1,457 2 0	1,471 1 0	...
386 6 0	35 10 0	6 0 0	520 14 0	404 13 0	...
205 14 0	1 3 0	...	339 13 0	319 4 0	...
102 6 0	3 9 0	...	222 15 0	251 2 0	...
282 14 0	...	...	232 14 0	92 0 0	...
4,539 6 0	105 11 0	84 0 0	8,510 1 0	7,237 13 0	...
203 10 0	...	...	247 4 0	130 1 0	...
59 6 0	...	...	59 6 0	23 3 0	...
324 13 0	...	22 5 0	487 11 0	300 4 0	...
255 11 0	...	...	357 8 0	217 13 0	...
528 6 0	4 11 0	...	823 15 0	548 4 0	...
220 9 0	13 11 0	...	447 9 0	348 4 0	...
378 2 0	...	0 9 0	663 8 0	477 11 0	...
23 0 0	...	...	23 0 0	9 0 0	...
185 7 0	0 15 0	...	200 0 0	123 16 0	...
2,179 0 0	19 5 0	22 14 0	3,399 13 0	2,178 7 0	...
18,080 12 0	422 13 0	212 0 0	30,014 3 0	25,859 10 0	...

POOR.—(Concluded.)

the operation of the Ganges Canal.

12.						13.	14.	15.
Total.	REVENUE ON WELL IRRIGATED AREA BY DRY RATES.					Difference of Revenue on area irrigated by wells.	Actual profits due to Canal.	Remarks.
	Meesun.	Boalee.	Dakur.	Bhoor.	Total.			
...	Rs. As. P. 16,443 6 0	
...	376 5 0	This pergunnah is devoid of either masonry or kutchha wells. The soil is so sandy, and water is so distant, kutchha wells would not last a year; consequently, they are never made. The masonry wells that do exist are used for drinking purposes only. The average cost of a masonry well in this pergunnah is close upon Rs. 1,000, and the zemindars inform me that a well large enough for irrigation, if carried to a firm clay bottom, would cost about Rs. 2,000. There are hardly any zemindars, excepting Lalla Sumboo Nath, Mahajun, of Chupar, rich enough to afford such an outlay. The average depth of water from the surface is 30 to 40 feet. There are some lands about Chupar and Khoosda that used to grow sugar-cane before canal irrigation was introduced, but it is extremely doubtful if they could do so now without water, because the soil has become impoverished by rapid succession of exhausting crops, and by the silt brought up with the canal water. It would not be prudent to apply full irrigated rent rates to such lands. The rates of rent are necessarily low in this pergunnah, owing to the general inferiority of the soil; and the entire absence of well irrigation of course makes the actual profits due to the canal mount up to a large sum. There is no avoiding this, and if Government is determined on making assessments irrespective of the canal, this difference must be deducted from the pergunnah jumma. In obedience to the minute recorded by Mr. R. Money, Senior Member, Board of Revenue, North-Western Provinces, dated 25th March, 1865, I have had the pergunnah again examined, but have found no reason to alter the views I have previously expressed on this subject.
...	104 10 0	
...	349 2 0	
...	784 4 0	
...	1,082 5 0	
...	485 7 0	
...	117 15 0	
...	333 13 0	
...	114 10 0	
...	137 13 0	
...	68 0 0	
...	377 7 0	
...	377 14 0	
...	1,471 1 0	
...	404 13 0	
...	319 4 0	
...	351 2 0	
...	92 0 0	
...	7,237 13 0	
...	130 1 0	
...	23 3 0	
...	300 4 0	
...	217 13 0	
...	548 4 0	
...	348 4 0	
...	477 11 0	
...	9 0 0	
...	123 15 0	
...	2,178 7 0	
...	25,859 10 0	Rs. 12,390 allowed.

S. N. MARTIN,
Collector.

Abstract of Statement A.

B.

No.	Pergunah.	Name of Mouzah.	Area irrigated by Canal.	Difference of Revenue between irrigated and unirrigated rates.	Difference of Revenue on area irrigated by wells.	Actual profit due to Canal.	Remarks.
				Ra.	Ra.	Ra.	
1	Pooa.	Simbhalkee ...	115	77	...	77	No deduction.
2		Qootubpore ...	1,303	1,126	...	1,126	Ra. 600 allowed.
		Total, Chuk Mozuffernugger ...	1,418	1,203	...	1,203	
1		Muhmoodpore Buhaanee,	585	591	...	591	Ra. 100 allowed.
2		Bussehra Hoasenpore ...	3,890	3,356	...	3,356	Ra. 1,800 ditto.
3		Bhoraharee ...	221	209	...	209	Ra. 100 ditto.
4		Phulaoda (5 Biswahs)...	315	387	...	387	Ra. 150 ditto.
5		Ditto (15 ditto) ...	763	1,093	...	1,093	Ra. 700 ditto.
6		Tikola ...	229	256	...	256	Ra. 100 ditto.
7		Chupra ...	333	358	...	358	Ra. 300 ditto.
8		Chuppar ...	1,775	2,051	...	2,051	Ra. 800 ditto.
9		Khowaja Nugla ...	396	356	...	356	Ra. 200 ditto.
10		Nugla Rutta ...	558	612	...	612	Ra. 310 ditto.
11		Salsimpore ...	239	270	...	270	Ra. 100 ditto.
12		Khoodda ...	1,031	912	...	912	Ra. 500 ditto.
13		Kolaharee ...	283	272	...	272	Ra. 150 ditto.
14		Lukhnoutee ...	100	174	...	174	Ra. 40 ditto.
15		Muhra'pore ...	437	364	...	364	Ra. 320 ditto.
16		Huraintee ...	364	365	...	365	Ra. 210 ditto.
		Total, Chuk Chuppar ...	11,522	11,626	...	11,626	
1		Purree (Chuk Goorh.)	404	325	...	325	R. 300 allowed.
1		Burla (Chuk Burlah.)	1,863	3,061	...	3,061	Ra. 1,000 ditto.
1		Kalawala Chuk Ruzkoollapore ...	3	2	...	2	No deduction necessary.
1		Boocha ...	92	50	...	50	Ra. 50 allowed.
2		Shukkurpore...	126	88	...	88	Ra. 90 ditto.
2		Nuroollapore ...	3	1	...	1	No deduction necessary.
4		Noornuggur ...	131	88	...	88	Ra. 50 allowed.
		Total, Chuk Bhainswal Sikundarpore ...	352	227	...	227	
		Carried over ...	15,642	15,444	...	15,444	

Abstract of Statement A.—(Concluded.)

B.

			Rs.	Rs.	Rs.	
	Brought over ...	15,642	16,444	...	16,444	
1	Bhainsurharee ...	366	376	...	376	Rs. 200 allowed.
2	Bhumyaree ...	165	105	...	105	No deduction necessary ; assessment independent of canal.
3	Bhojsharee ...	366	349	...	349	Rs. 100 only allowed.
4	Poor ...	676	784	...	784	Rs. 500 allowed.
5	Taijulhara ...	977	1,082	...	1,082	Rs. 400 ditto.
6	Tajpore ...	434	486	...	486	Rs. 300 ditto.
7	Raipore Jhoja ...	222	118	...	118	Rs. 100 ditto.
8	Simurtee ...	351	324	...	324	Rs. 100 ditto.
9	Soanharee ...	358	115	...	115	No deduction necessary ; assessment independent of canal.
10	Shahjahanpore ...	136	136	...	136	Ditto ditto.
11	Abdoollapore ...	153	68	...	68	No deduction necessary.
12	Qasampore ...	536	377	...	377	Rs. 100 allowed.
13	Kailimpore Jelalpore ...	427	378	...	378	Rs. 200 ditto.
14	Khankharee ...	1,295	1,471	...	1,471	Rs. 650 ditto.
15	Khindurya ...	464	405	...	405	No deduction necessary.
16	Goomaotee ...	302	319	...	319	Rs. 160 allowed.
17	Mandla ...	198	251	...	251	Rs. 150 ditto.
18	Nohpore ...	207	92	...	92	No deduction necessary ; assessment independent of canal.
	Total, Chuk Poor ...	7,597	7,238	...	7,238	
1	Buhlalpore ...					Rs. 50 only allowed.
2	Chuppupore ...					No deduction necessary ; assessment independent of canal.
3	Dhumat Bangur ...					Rs. 100 allowed.
4	Dhoodlee ...					Rs. 50 ditto.
5	Tooghluapore ...					Rs. 300 ditto.
6	Kumhara ...					Rs. 160 ditto.
7	Godhna Godhnee ...					Rs. 300 ditto.
8	Mirzapore Shahjehan- pore ...					No deduction necessary ; assessment independent of canal.
9	Nugla Mehرداد ...					Rs. 80 allowed for canal pro- fits.
	Total, Chuk Birkimpore,	2,786	2,178	...	2,178	
	GRAND TOTAL ...	26,025	25,860	...	25,860	*Rs. 12,290 allowed as pro- fits due to canal.

The Canoongos of Moosuffernuggur has been deputed for the second time to ascertain if there are any wells in this pergunnah : he reports only one in Poor. The depth of water in this pergunnah is of an average between 30 to 40 feet from the surface. It varies of course, but never below 30 feet—frequently above that.

* I have made no calculation of the amount of land that would be thrown out of cultivation were the canal to be stopped. In very many places the cultivation without canal water would fall off immensely ; but I have no means of ascertaining the amount, even approximately, consequently have left this out altogether. This is one of the many difficulties of making an assessment independent of canal.

S. N. MARTIN,
Collector.

PERGUNNAH
Statement showing Profits due to

1.	2.	3.					4.	
No.	Name of Mousah.	AREA IRRIGATED BY CANAL.					REVENUE RATE PER	
		Meesun.	Roslee.	Dakur.	Bhoor.	Total.	Meesun.	Roslee.
							Ra. As. P.	Ra. As. P.
1	Ajeestpoor ...	7	105	4	...	116		
2	Akburpoor ...	206	135	1	2	344		
3	Islamabad ...	71	85	1	...	157		
4	Bahpoor Azeespoor ...	38	117	26	...	181		
5	Burhaoo ...	27	66	4	...	97		
6	Bowara Khoord ...	133	179	...	2	314		
7	Ditto Kullan ...	77	257	...	...	334		
8	Boparah Hoesainpoor ...	60	35	...	...	95		
9	Bangee ...	181	360	20	...	561		
10	Bhenasee ...	535	444	13	4	1,004		
11	Bhoop Kharee ...	96	271	16	7	390		
12	Bulhara ...	6	77	...	...	83		
13	Boonta ...	61	42	...	...	103		
14	Peepulhara Yousafpoor,...	101	308	1	...	410		
15	Tajpoor ...	137	139	1	...	277		
16	Tiganees ...	155	63	...	...	218		
17	Behut ...	232	...	...	...	...
18	Titora ...	220	208	...	1	428		
19	Johra ...	75	131	...	...	206		
20	Juhangeerpoor ...	88	139	1	...	206		
21	Chundseena ...	67	140	...	...	207		
22	Khanjehanpoor ...	46	75	...	...	121		
23	Khanooipoor ...	8	7	2	...	13		
24	Doodaharee ...	197	324	...	8	529		
25	Doodhlee ...	58	102	...	...	160		
26	Dahoor ...	135	153	5	...	293		
27	Raipore Nuglee ...	75	204	...	...	279		
28	Roostumpoor ...	45	107	...	...	152		
29	Bokunpoor ...	71	85	2	...	158		
30	Sutharee ...	26	40	...	...	66		
31	Surdhun ...	84	98	...	...	182		
32	Surai Buzsoolpoor ...	56	74	...	...	130	2 8	1 12 2
33	Sikrara ...	44	162	...	...	206		
34	Sikunderpoor Kulan ...	2	39	...	...	41		
35	Sonta Ubdoola Nuggur ...	176	575	...	7	751		
36	Shahpoor ...	35	82	3	...	120		
37	Sherepoor ...	90	478	14	2	584		
38	Shekhoopoora ...	60	61	...	...	121		
39	Umberpoor ...	117	...	...	...	171		
40	Fuheempoor Kulan ...	84	230	2	...	316		
41	Fuhermpoor Khoord ...	14	2	...	...	16		
42	Kukrals ...	18	11	...	...	29		
43	Khatouls ...	60	20	5	...	85		
44	Khatoulee ...	143	240	7	3	493		
45	Kharee Tugan ...	67	76	...	...	143		
46	Kharee Rungran ...	188	...	12	...	205		
47	Gaonree ...	34	240	50	...	324		
48	Gungdhara, alias Moosoola Nuggur,	6	188	2	...	194		
49	Gungdharee, alias Goonree	214	188	15	...	398		
50	Ladpoor ...	207	167	11	...	385		
51	Noona ...	85	319	7	...	411		
52	Lisara Oomurpoor ...	152	...	8	...	240		

KHATOWLEE.

the operation of the Ganges Canal.

		5.				
IRRIGATED ACRES.		REVENUE ON IRRIGATION AREA.				
Dakur.	Bhoor.	Meesun.	Roalee.	Dakur.	Bhoor.	Total.
Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
		17 10 0	184 13 0	4 10 0	...	207 1 0
		518 14 0	237 11 0	1 2 0	2 15 0	760 10 0
		178 13 0	149 10 0	1 2 0	...	329 9 0
		95 11 0	206 0 0	29 15 0	...	331 10 0
		68 0 0	116 3 0	4 10 0	...	188 13 0
		335 0 0	315 2 0	...	2 15 0	653 1 0
		193 15 0	452 6 0	...	...	646 5 0
		151 2 0	63 6 0	...	...	214 8 0
		455 14 0	633 12 0	23 0 0	...	1,112 10 0
		1,347 9 0	795 11 0	14 15 0	5 13 0	2,164 0 0
		241 13 0	477 1 0	18 7 0	10 3 0	747 8 0
		15 2 0	135 9 0	...	...	150 11 0
		153 10 0	73 15 0	...	...	227 9 0
		254 6 0	542 3 0	1 2 0	...	797 11 0
		345 1 0	244 12 0	1 2 0	...	590 15 0
		390 6 0	110 14 0	...	...	501 4 0
		584 6 0	116 3 0	...	...	700 9 0
		554 3 0	366 3 0	...	1 7 0	921 13 0
		188 15 0	230 10 0	...	...	414 9 0
		166 4 0	244 11 0	1 2 0	...	412 1 0
		168 12 0	246 7 0	...	...	415 3 0
		115 14 0	132 1 0	...	...	247 15 0
		7 9 0	12 5 0	2 5 0	...	22 3 0
		496 3 0	570 6 0	...	11 10 0	1,078 3 0
		146 1 0	179 9 0	...	...	825 10 0
		340 1 0	269 5 0	5 12 0	...	615 2 0
		188 15 0	359 2 0	...	...	548 1 0
		113 6 0	188 6 0	...	...	301 12 0
		178 13 0	149 10 0	2 5 0	...	330 12 0
1 2 5	1 7 3	65 8 0	70 7 0	...	...	135 15 0
		211 9 0	172 8 0	...	...	284 1 0
		141 1 0	130 4 0	...	...	271 5 0
		110 13 0	285 3 0	...	...	296 0 0
		5 1 0	68 10 0	...	...	73 11 0
		443 5 0	485 14 0	...	10 3 0	939 6 0
		95 11 0	144 5 0	3 7 0	...	243 7 0
		226 11 0	841 8 0	16 2 0	2 15 0	187 4 0
		151 2 0	107 6 0	...	...	258 8 0
		219 2 0	147 13 0	...	...	366 15 0
		211 9 0	404 14 0	2 5 0	...	618 12 0
		35 4 0	3 8 0	...	...	38 12 0
		32 12 0	19 6 0	...	...	52 2 0
		151 2 0	35 3 0	5 12 0	5 12 0	192 1 0
		360 3 0	598 9 0	8 1 0	4 6 0	971 3 0
		168 12 0	133 12 0	...	...	302 8 0
		335 0 0	105 10 0	13 13 0	...	454 7 0
		85 10 0	422 8 0	57 9 0	...	565 11 0
		15 2 0	239 7 0	2 5 0	...	256 14 0
		539 0 0	297 8 0	17 4 0	...	853 12 0
		521 6 0	294 0 0	12 11 0	...	828 1 0
		214 2 0	561 9 0	8 1 0	2 15 0	786 11 0
		382 14 0	140 13 0	9 3 0	...	532 14 0
		241 13 0	167 4 0	...	...	409 1 0
		433 4 0	93 5 0	...	...	526 9 0
		279 9 0	147 14 0	...	20 6 0	447 13 0
		176 5 0	160 3 0	...	...	336 8 0
		690 2 0	392 9 0	2 5 0	...	1,085 0 0
		405 8 0	1,267 8 0	9 3 0	1 7 0	1,683 10 0
		100 12 0	322 2 0	3 7 0	8 11 0	435 0 0
		47 14 0	179 9 0	...	18 14 0	246 5 0
		10 1 0	156 11 0	1 2 0	1 7 0	169 5 0
		622 2 0	1,001 12 0	2 5 0	7 4 0	1,633 7 0
		302 4 0	86 4 0	...	...	388 8 0
...	...	16,044 9 0	17,489 8 0	216 8 0	113 7 0	33,934 0 0

PERGUNNAH
Statement showing Profits due to the

1.	2.	6.					
No.	Name of Mouzah.	REVENUE RATE PER UNIRRIGATED ACRE.				REVENUE ON :	
		Meesun.	Roslee.	Dakur.	Bhoor.	Meesun.	Roslee.
		Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
1	Ajeetpoor ...					7 12 0	116 9 0
2	Akburpoor ...					228 11 0	149 14 0
3	Islamabad ...					78 13 0	94 6 0
4	Bahpoor Azeespoor ...					42 3 0	129 14 0
5	Burhasoo ...					29 15 0	73 4 0
6	Bowara Khoord ...					147 10 0	198 11 0
7	Ditto Kullan ...					85 7 0	285 4 0
8	Boparah Hosseinpoor ...					66 10 0	39 15 0
9	Bangee ...					200 15 0	399 10 0
10	Bhenses ...					593 14 0	501 12 0
11	Bhoop Kharee ...					106 9 0	300 13 0
12	Bulhara ...					6 11 0	85 7 0
13	Boonta ...					67 12 0	46 10 0
14	Peepulhara Yousufpoor,					112 2 0	341 14 0
15	Tajpoor ...					152 1 0	154 5 0
16	Tigane ...					172 1 0	69 15 0
17	Behut ...					257 9 0	73 5 0
18	Titara ...					244 3 0	230 14 0
19	Johra ...					83 4 0	145 7 0
20	Juhangeerpoor ...					73 5 0	154 5 0
21	Chundseena ...					74 7 0	155 6 0
22	Khanjehanpoor ...					51 1 0	83 4 0
23	Khancoopoer ...					3 5 0	7 12 0
24	Doodaharee ...					218 11 0	359 10 0
25	Doodhlee ...					64 6 0	113 4 0
26	Dahoor ...					149 14 0	169 13 0
27	Raipoor Nuglee ...					83 4 0	226 7 0
28	Roostumpoor ...					49 15 0	118 12 0
29	Rokunpoor ...					78 13 0	94 6 0
30	Sutharee ...					28 14 0	44 6 0
31	Surdhun ...					93 4 0	108 12 0
32	Surai Russoolpoor ...					62 3 0	82 2 0
33	Sikrara ...	1 1 9	1 1 9	0 15 0	0 11 4	48 13 0	179 13 0
34	Sikunderpoor Kulan ...					2 3 0	43 4 0
35	Sonta Ubdolla Naggur,					195 6 0	306 5 0
36	Shahpoor ...					42 3 0	91 0 0
37	Sherepoor ...					99 14 0	530 9 0
38	Shekhoopoora ...					66 10 0	67 12 0
39	Umberpoor ...					96 9 0	93 4 0
40	Fuheempoor Kulan ...					93 4 0	255 5 0
41	Fuheempoor Khoord ...					15 8 0	2 4 0
42	Kukrala ...					14 7 0	12 3 0
43	Khatoula ...					66 10 0	22 3 0
44	Khatoulee ...					158 12 0	377 6 0
45	Kharee Tugan ...					74 6 0	84 6 0
46	Kharee Rungran ...					147 10 0	66 10 0
47	Gaonree ...						
48	Gungdhara, alias Moo-					37 12 0	266 0 0
	zoolla Naggur ...						
49	Gungdharee, alias Goon-					6 11 0	151 0 0
	ree ...					237 9 0	187 10 0
50	Ladpoor ...					229 12 0	185 6 0
51	Noona ...					94 6 0	354 1 0
52	Lisora Oomurpoor ...					168 12 0	88 13 0
53	Moobarikpoor ...					106 9 0	105 7 0
54	Mutharee ...					190 15 0	58 13 0
55	Mujahudpoor ...					123 3 0	93 4 0
56	Muhee-ood-deenpoor ...					77 11 0	102 0 0
57	Murh Kureempoor ...					304 2 0	247 8 0
58	Munsoorpoor ...					178 12 0	799 3 0
59	Humeedpoor Mokpoor ...					44 5 0	203 2 0
60	Munowurpoor ...					21 1 0	113 4 0
61	Munowurpoor Muzra						
	Naola ...					4 7 0	98 13 0
62	Naola ...					274 2 0	631 10 0
63	Yaheepoor ...					133 0 0	54 6 0
Total ...		...	...	...	...	7,070 12 0	11,028 8 0

KHATOWLEE.

operation of the Ganges Canal.—(Continued.)

7.			8.	9.	10.				
UNIRRIGATED AREA.			Difference of Revenue be- tween irri- gated and unir- rigated rates.	Number of wells closed by canal.	TWENTY-TWO ACRES ALLOWED TO EACH WELL.				
Dakur.	Bhoor.	Total.			Meesun.	Roslee.	Dakur.	Bhoor.	Total.
Ra. As. P.	Ra. As. P.	Ra. As. P.	Ra. As. P.						
3 12 0	...	128 1 0	79 0 0	1	1	20	1	...	22
0 15 0	1 7 0	380 15 0	379 11 0	1	27	17	...	...	44
0 15 0	...	174 2 0	155 7 0	...	...	...	...	...	...
24 7 0	...	196 8 0	135 2 0	...	...	...	...	...	...
3 12 0	...	106 15 0	81 14 0	...	...	...	...	...	...
...	1 7 0	347 12 0	305 5 0	...	...	...	...	...	...
...	...	370 11 0	275 10 0	...	...	...	...	...	...
...	...	106 9 0	107 15 0	...	...	...	...	...	...
18 13 0	...	619 6 0	493 4 0	9	36	72	2	...	110
12 3 0	2 13 0	1,110 10 0	1,053 6 0	10	176	149	4	1	330
15 0 0	4 15 0	427 5 0	320 3 0	5	33	92	5	2	132
...	...	92 2 0	58 9 0	...	...	...	...	...	...
...	...	114 6 0	113 3 0	...	...	...	...	...	...
0 15 0	...	454 15 0	342 12 0	3	16	50	...	...	66
0 15 0	...	307 5 0	283 10 0	5	54	56	...	...	110
...	...	242 0 0	259 4 0	2	31	13	...	...	44
...	...	330 14 0	369 11 0	2	34	10	...	...	44
...	0 11 0	475 12 0	446 1 0	3	34	32	...	...	66
...	...	228 11 0	190 14 0	...	...	...	...	...	...
0 15 0	...	228 9 0	183 8 0	1	7	15	...	...	22
...	...	229 13 0	185 6 0	...	...	...	...	...	...
...	...	134 5 0	113 10 0	...	...	...	...	...	...
1 14 0	...	12 15 0	9 4 0	...	...	...	...	...	...
...	5 10 0	583 15 0	494 4 0	...	...	...	...	...	...
...	...	177 10 0	148 0 0	...	...	...	...	...	...
4 11 0	...	324 6 0	290 12 0	5	51	57	2	...	110
...	...	309 11 0	238 6 0	1	6	16	...	...	22
...	...	168 11 0	133 1 0	...	...	...	...	...	...
1 14 0	...	175 1 0	155 11 0	1	10	12	...	...	22
...	...	73 4 0	62 11 0	...	...	...	...	...	...
...	...	202 0 0	182 1 0	1	10	12	...	...	22
...	...	144 5 0	127 0 0	1	9	13	...	...	22
...	...	228 10 0	167 6 0	2	9	35	...	...	44
...	...	45 7 0	28 4 0	...	...	...	...	...	...
...	4 15 0	506 10 0	432 12 0	...	...	...	...	...	...
2 13 0	...	136 0 0	107 7 0	1	7	15	...	...	22
13 2 0	1 7 0	645 0 0	442 4 0	1	3	18	1	...	22
...	...	134 6 0	124 2 0	2	22	22	...	...	44
...	...	189 13 0	177 2 0	...	...	...	...	...	...
1 14 0	...	350 7 0	268 5 0	1	5	17	...	...	22
...	...	17 12 0	21 0 0	...	...	...	...	...	...
...	...	26 10 0	25 8 0	...	...	...	...	...	...
4 11 0	...	93 8 0	98 9 0	1	16	5	1	...	22
6 9 0	2 2 0	544 13 0	426 6 0	1	13	30	1	...	44
...	...	158 12 0	143 12 0	...	...	...	...	...	...
11 4 0	...	225 8 0	228 15 0	5	100	45	9	...	54
46 15 0	...	350 11 0	215 0 0	...	...	...	...	...	...
1 14 0	...	159 9 0	97 5 0	...	...	...	...	...	...
14 3 0	...	439 6 0	414 6 0	13	153	122	11	...	286
10 5 0	...	425 7 0	402 10 0	1	12	9	1	...	22
6 9 0	1 7 0	456 7 0	330 4 0	...	...	...	...	...	...
7 8 0	...	265 1 0	267 13 0	...	...	...	...	...	...
...	...	212 0 0	197 1 0	1	11	11	...	...	22
...	...	249 12 0	276 13 0	1	17	5	...	...	22
...	9 14 0	226 5 0	221 8 0	1	11	9	2	...	22
...	...	179 11 0	156 13 0	...	...	...	...	...	...
1 14 0	...	553 8 0	531 8 0	1	12	10	...	...	22
7 8 0	0 11 0	986 2 0	697 8 0	10	40	178	2	...	220
2 13 0	4 4 0	254 8 0	180 8 0	...	...	...	...	...	...
...	9 3 0	143 8 0	102 13 0	...	...	...	...	...	...
0 15 0	0 11 0	104 14 0	64 9 0	...	...	...	...	...	...
1 14 0	3 9 0	911 3 0	722 4 0	...	...	...	...	...	...
...	...	187 6 0	201 2 0	...	...	...	...	...	...
233 12 0	55 2 0	18,388 2 0	15,545 14 0	47	966	1,167	42	3	2,178

PERGUNNAH
Statement showing profits due to the

1.	2.	11.			
No.	Name of Mouzah.	REVENUE DERIVABLE FROM WELL			
		Meesun.	Roslee.	Daknr.	Bhoor.
		Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
1	Ajeetpoor	2 8 0	35 3 0	1 2 0	...
2	Akburpoor... ..	68 0 0	29 15 0	...	...
3	Islamabad ... ..	...	...	...	...
4	Bahpoor Azeespoor ... ..	...	...	...	...
5	Burhsoo ... ..	...	...	...	...
6	Bowara Khoord ... ..	...	...	...	...
7	Ditto Kullan ... ..	...	...	...	...
8	Boparah Hosseinpoor ... ..	...	...	...	...
9	Bangee	90 11 0	126 12 0	2 5 0	...
10	Bhensee	443 5 0	262 5 0	4 10 0	1 7 0
11	Bhoop Kharee	83 2 0	161 15 0	5 12 0	2 14 0
12	Bulhara ... ..	...	...	...	...
13	Boonta ... ..	...	...	...	...
14	Peepulhara Yousufpoor	40 5 0	88 0 0	...	...
15	Tajpoor	136 0 0	98 9 0	...	...
16	Tigancee	78 1 0	22 14 0	...	...
17	Behut	85 10 0	17 10 0	...	...
18	Titora	85 10 0	56 5 0	...	...
19	Johra ... ..	...	...	...	...
20	Juhangeerpoor	17 10 0	26 6 0	...	...
21	Chundseena ... ..	...	...	...	...
22	Khanjehanpoor ... ..	...	...	...	...
23	Khanoopoor ... ..	...	...	...	...
24	Doodaharee ... ..	...	...	...	...
25	Doodhlee ... ..	...	...	...	...
26	Dahoor	128 7 0	100 5 0	2 5 0	...
27	Raipore Nuglee	15 2 0	28 2 0	...	...
28	Roostumpoor ... ..	...	...	...	...
29	Rokunpoor	25 3 0	21 2 0	...	...
30	Sutharee ... ..	...	...	...	...
31	Surdhun	25 3 0	21 2 0	...	...
32	Surai Russoolpoor... ..	22 11 0	22 14 0	...	...
33	Sikrara	22 11 0	61 10 0	...	...
34	Sikunderpoor Kulan ... ..	...	...	...	...
35	Sonta Ubdoolia Nuggur ... ..	...	...	...	...
36	Shahpoor	17 10 0	26 6 0	...	...
37	Sherepoor	7 9 0	31 11 0	1 2 0	...
38	Shekhoopora	55 7 0	38 12 0	...	...
39	Umberpoor ... ..	...	...	...	...
40	Fuheempoor Kulan	12 10 0	29 15 0	...	...
41	Fuheempoor Khoord ... ..	...	...	...	...
42	Kukrala ... ..	...	...	...	...
43	Khatoula	40 5 0	8 13 0	1 2 0	...
44	Khatoulee	32 12 0	52 13 0	1 2 0	...
45	Kharee Tugan ... ..	...	...	...	...
46	Kharee Rungran	251 14 0	79 3 0	10 6 0	...
47	Gaonree ... ..	...	...	...	...
48	Gungdhara, alias Moozoolla Nuggur ... ..	...	...	...	...
49	Gungdharee, alias Goonree	385 6 0	214 13 0	12 11 0	...
50	Ladpoor	30 4 0	15 14 0	1 2 0	...
51	Noona ... ..	...	...	...	...
52	Lisora Oomurpoor ... ..	...	...	...	...
53	Moobarikpoor	27 11 0	19 6 0	...	...
54	Mutharee	42 13 0	8 13 0	...	...
55	Mujahudpoor	27 11 0	15 13 0	2 5 0	...
56	Muhee-ood-deenpoor ... ..	...	...	...	...
57	Murh Kureempoor	30 4 0	17 10 0	...	...
58	Munsoorpoor	100 12 0	313 6 0	2 5 0	...
59	Humædpoor Mokpoor ... ..	...	...	...	...
60	Munowurpoor ... ..	...	...	...	...
61	Munowurpoor Muzra Naola ... ..	...	...	...	...
62	Naola ... ..	...	...	...	...
63	Yaheespoor ... ..	...	...	...	...
Total		2,483 3 0	2,054 5 0	48 5 0	4 5 0

operation of the Ganges Canal.—(Continued.)

12.					
IRRIGATION.	REVENUE ON WELL IRRIGATED AREA BY DRY RATE.				
Total.	Meerut.	Roscoe.	Dakur.	Bhoor.	Total.
Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
38 13 0	1 2 0	22 3 0	0 15 0	...	24 4 0
27 15 0	39 15 0	18 13 0	...	...	48 12 0
...
...
...
...
...
219 12 0	39 15 0	79 14 0	1 14 0	...	121 11 0
711 11 0	195 5 0	165 6 0	3 13 0	0 11 0	365 2 0
253 11 0	36 10 0	102 2 0	4 11 0	1 7 0	144 14 0
...
...
128 5 0	17 12 0	55 8 0	...	...	73 4 0
234 9 0	59 15 0	62 3 0	...	...	122 2 0
100 15 0	34 6 0	14 7 0	...	...	48 13 0
103 4 0	37 12 0	11 3 0	...	...	48 14 0
141 15 0	37 12 0	35 7 0	...	...	73 3 0
...
44 0 0	7 12 0	16 10 0	...	...	24 6 0
...
...
...
...
231 1 0	56 10 0	63 4 0	1 14 0	...	121 12 0
43 4 0	6 11 0	17 12 0	...	...	24 7 0
...
46 5 0	11 2 0	13 5 0	...	...	24 7 0
...
46 5 0	11 2 0	13 5 0	...	...	24 7 0
45 9 0	10 0 0	14 7 0	...	...	24 7 0
84 5 0	10 0 0	38 13 0	...	...	48 13 0
...
...
44 0 0	7 12 0	16 10 0	...	...	24 6 0
40 6 0	3 5 0	20 0 0	0 15 0	...	24 4 0
94 3 0	24 7 0	24 7 0	...	...	48 14 0
...
42 9 0	5 9 0	18 14 0	...	...	24 7 0
...
...
50 4 0	17 12 0	5 9 0	0 15 0	...	24 4 0
86 11 0	14 7 0	33 5 0	0 15 0	...	48 11 0
...
341 7 0	111 0 0	49 15 0	6 7 0	...	169 6 0
...
...
612 14 0	169 13 0	135 7 0	10 5 0	...	315 9 0
47 4 0	13 5 0	10 0 0	0 15 0	...	24 4 0
...
...
47 1 0	12 3 0	12 3 0	...	...	24 6 0
51 10 0	18 14 0	5 9 0	...	...	24 7 0
45 13 0	12 3 0	10 0 0	1 14 0	...	24 1 0
...
47 14 0	13 5 0	11 2 0	...	...	24 7 0
416 7 0	44 6 0	197 9 0	1 14 0	...	243 13 0
...
...
...
...
4,540 2 0	1,072 2 0	1,295 3 0	39 6 0	2 2 0	2,408 13 0

PERGUNNAH

Statement showing profits due to the

1.	II								13.	14.
No.	Name of Mouzah.								Difference of Revenue on area irrigated by wells.	Actual profits due to canal.
									Rs. As. P.	Rs. As. P.
1	Ajeetpoor	...	...	...	...	...	...	...	14 9 0	64 7 0
2	Akburpoor	...	...	...	...	...	...	...	49 3 0	330 8 0
3	Islamabad	...	...	...	...	...	...	...	...	155 7 0
4	Bahpoor Azeetpoor	...	...	...	...	...	...	...	...	135 2 0
5	Burhaoo	...	...	...	...	...	...	...	...	81 14 0
6	Bowara Khoord	...	...	...	...	...	...	...	...	305 5 0
7	Ditto Kullian	...	...	...	...	...	...	...	...	275 10 0
8	Boparah Hoaseinpoor	...	...	...	...	...	...	...	...	107 15 0
9	Bangee	...	...	...	...	...	...	...	98 1 0	395 3 0
10	Bhensee	...	...	...	...	...	...	...	346 9 0	706 13 0
11	Bhoop Kharee	...	...	...	...	...	...	...	106 13 0	211 6 0
12	Bulhara	...	...	...	...	...	...	...	...	58 9 0
13	Boonta	...	...	...	...	...	...	...	...	113 3 0
14	Peepulhara Yousufpoor	...	...	...	...	...	...	...	55 1 0	287 11 0
15	Tajpoor	...	...	...	...	...	...	...	112 7 0	171 3 0
16	Tigance	...	...	...	...	...	...	...	52 2 0	207 2 0
17	Behut	...	...	...	...	...	...	...	54 6 0	315 5 0
18	Titara	...	...	...	...	...	...	...	68 12 0	377 5 0
19	Johra	...	...	...	...	...	...	...	...	190 14 0
20	Juhangeerpoor	...	...	...	...	...	...	...	19 10 0	163 14 0
21	Chundseena	...	...	...	...	...	...	...	...	185 6 0
22	Khanjehanpoor	...	...	...	...	...	...	...	...	113 10 0
23	Khanooipoor	...	...	...	...	...	...	...	...	9 4 0
24	Doodaharee	...	...	...	...	...	...	...	...	494 4 0
25	Doodhlee	...	...	...	...	...	...	...	...	148 0 0
26	Dahoor	...	...	...	...	...	...	...	109 15 0	181 7 0
27	Raipore Nanglee	...	...	...	...	...	...	...	18 13 0	219 9 0
28	Roostumpoor	...	...	...	...	...	...	...	...	133 1 0
29	Rokunpoor	...	...	...	...	...	...	...	21 14 0	133 13 0
30	Sutharee	...	...	...	...	...	...	...	...	62 11 0
31	Surdhun	...	...	...	...	...	...	...	21 14 0	160 3 0
32	Surat Rumoolpoor	...	...	...	...	...	...	...	21 2 0	105 14 0
33	Sikrara	...	...	...	...	...	...	...	35 8 0	131 14 0
34	Sikunderpoor Kulan	...	...	...	...	...	...	...	...	28 4 0
35	Sonta Ubdoola Nuggur	...	...	...	...	...	...	...	...	432 12 0
36	Shahpoor	...	...	...	...	...	...	...	19 10 0	87 13 0
37	Sherepoor	...	...	...	...	...	...	...	16 2 0	426 2 0
38	Shekhoopora	...	...	...	...	...	...	...	45 5 0	78 12 0
39	Umberpoor	...	...	...	...	...	...	...	...	177 2 0
40	Fuheempoor Kulan	...	...	...	...	...	...	...	18 2 0	250 3 0
41	Fuheempoor Khoord	...	...	...	...	...	...	...	...	21 0 0
42	Kukrala	...	...	...	...	...	...	...	...	25 8 0
43	Khatoula	...	...	...	...	...	...	...	26 0 0	72 9 0
44	Khatoulee	...	...	...	...	...	...	...	38 0 0	388 6 0
45	Kharee Tugan	...	...	...	...	...	...	...	...	143 12 0
46	Kharee Rangran	...	...	...	...	...	...	...	172 1 0	56 14 0
47	Gaonree	...	...	...	...	...	...	...	...	215 0 0
48	Gungdhara, alias Moosoolia Nuggur	...	...	...	...	...	...	...	...	95 5 0
49	Gungdharee, alias Goonree	...	...	...	...	...	...	...	297 5 0	117 1 0
50	Ladpoor	...	...	...	...	...	...	...	23 0 0	379 10 0
51	Noona	...	...	...	...	...	...	...	...	330 4 0
52	Lisora Oomurpoor	...	...	...	...	...	...	...	...	267 13 0
53	Moobarikpoor	...	...	...	...	...	...	...	22 11 0	174 6 0
54	Mutharee	...	...	...	...	...	...	...	27 3 0	249 10 0
55	Mujahudpoor	...	...	...	...	...	...	...	21 12 0	199 12 0
56	Muhce ood deenpoor	...	...	...	...	...	...	...	...	156 13 0
57	Murh Kureempoor	...	...	...	...	...	...	...	23 7 0	508 1 0
58	Munsoorpoor	...	...	...	...	...	...	...	172 10 0	524 14 0
59	Humeedpoor Mokpoor	...	...	...	...	...	...	...	...	180 8 0
60	Munowurpoor	...	...	...	...	...	...	...	...	102 13 0
61	Munowurpoor Nuzra Naola	...	...	...	...	...	...	...	...	64 7 0
62	Naola	...	...	...	...	...	...	...	...	722 4 0
63	Yaheapoor	...	...	...	...	...	...	...	...	201 2 0
Total									2,131 5 0	13,414 9 0

KHATOWLEE.

operation of the Ganges Canal.—(Concluded.)

15.			
Remarks.			
<p>For the sake of comparison a pergunnahwar form of this kind might be adopted, in order to ascertain the amount of canal profits,—</p> <p>The whole cultivated area is ... 40,364 acres.</p> <p>Taking an average, say of 22 acres to each well, gives in wells ... 1,835 „ including 300 <i>pucha</i> wells in existence.</p> <p>Grant 14 acres of irrigation to each masonry well, and an average revenue rate per acre of Rs. 1-11-6: thus, to 300 <i>pucha</i> wells there will be ... 4,300 „</p> <p>Grant 11 acres, ditto, to 1,535 <i>kutch</i> wells, at a revenue rate of Rs. 1-11-6 ... 16,885 „</p> <p>There remain of the whole cultivated area 19,379 acres unirrigated, to which apply an average revenue rate all round of 15 annas, 7 pie, ...</p>			
19,379 acres × 15 as. 7 pie	...		=18,776 15 1
Total revenue of pergunnah	...		=55,016 12 7
The actual revised jumma, including canal profits	...		66,311 0 0
Difference due to canal	...		11,294 8 5
My first estimate after allowing only for actual, not probable wells, was	...		13,415 0 0
By mouzahwar revision canal profits, 2nd estimate	...		6,943 0 0

S. N. MARTIN,
Collector.

Abstract of Statement A.

B.

No.	Pargunnah.	Name of Monzah.	Acre irrigated by Canal.	Difference of Revenue between irrigated and unirrigated rates.	Difference of Revenue on area irrigated by wells.	Actual profits due to Canal.	Remarks.
				Rs.	Rs.	Rs.	
1	Khatowlee.	Ajeetpoor	116	79	15	64	Rs. 60 allowed for Canal profits.
2		Akburpoor	344	380	49	331	Rs. 200 ditto.
3		Islamabad	157	155	...	155	Rs. 100 ditto.
4		Bahpoor Azeerpoor	181	135	...	135	Rs. 70 ditto.
5		Burhsoo	97	82	...	82	Rs. 80 ditto.
6		Bowara Khoord	314	305	...	305	Rs. 200 ditto.
7		Ditto Kullan	334	276	...	276	Rs. 100 ditto.
8		Boparah Hosseinpoor	96	108	...	108	Rs. 100 ditto.
9		Bangee	561	493	98	395	Rs. 200 ditto.
10		Bhensee	1,004	1,054	347	707	Rs. 400 ditto.
11		Bhoop Kharee	390	320	109	211	Rs. 150 ditto.
12		Bulhara	83	59	...	59	Rs. 60 ditto.
13		Boonta	103	113	...	113	Rs. 80 ditto.
14		Peepulhara Yousufpoor	410	343	55	288	Rs. 150 ditto.
15		Tajpoor	277	283	112	171	Rs. 130 ditto.
16		Tigancee	218	259	52	207	Rs. 120 ditto.
17		Behut	298	369	54	315	Rs. 100 ditto.
18		Titara	429	446	69	377	Rs. 200 ditto.
19		Johra	206	191	...	191	Rs. 110 ditto.
20		Juhangeerpoor	206	184	20	164	Rs. 90 ditto.
21		Chundaseena	207	185	...	185	No deduction necessary; assessment independent of Canal.
22		Khanjehanpoor	121	114	...	114	Rs. 70 allowed for Canal profits.
23		Khanooipoor	12	9	...	9	No deduction necessary; irrigation trifling.
24		Doodaharee	529	494	...	494	Rs. 200 allowed for Canal profits.
25		Doodhlee	160	148	...	148	Rs. 50 ditto.
26		Dahoor	293	290	109	181	Rs. 100 ditto.
27		Raipore Nuglee	279	239	19	220	Rs. 150 ditto.
28		Roostumpoor	152	133	...	133	Rs. 70 ditto.
29		Rokunpoor	158	156	22	134	Rs. 90 ditto.
30		Sutharee	66	63	...	63	No deduction has been thought necessary on account of proximity of springs.
31		Surdhun	182	182	22	160	Rs. 100 allowed for Canal profits.
32		Surai Russoolpoor	130	127	21	106	Rs. 100 ditto.
33		Sikrara	206	167	35	132	Rs. 95 ditto.
34		Sikunderpoor Kulan... ..	41	28	...	28	Item so small, no deduction necessary.
		Carried forward	8,360	7,965	1,208	6,757	

Abstract of Statement A.—(Concluded.)

B.

No.	Pergunnah.	Name of Mouzah.	Area irrigated by Canal.	Difference of Revenue between irrigated and unirrigated rates.	Difference of Revenue on area irrigated by wells.	Actual profits due to Canal.	Remarks.
				Rs.	Rs.	Rs.	
		Brought over ...	8,360	7,965	1,208	6,757	
35	Khatowlee.—(Concluded.)	Sonta Ubdoolia Nugger ...	459	433	...	433	Rs. 250 allowed for Canal profits.
36		Shahpoor	123	108	20	88	Rs. 50 ditto.
37		Sherepoor	584	442	16	426	Rs. 200 ditto.
38		Shekhoopoor	121	124	45	79	Rs. 55 ditto.
39		Umberpoor	171	177	...	177	No deduction necessary; assessment independent of Canal.
40		Fuheempoor Kulan	316	268	18	250	Rs. 175 allowed for Canal profits.
41		Fuheempoor Khoord ...	16	21	...	21	No deduction necessary; assessment independent of Canal.
42		Kukrala	24	26	...	26	No deduction necessary; ditto.
43		Khatoula	85	99	26	73	Rs. 45 allowed for Canal profits.
44		Khatoulee	493	426	38	388	Rs. 213 ditto.
45		Kharee Tugan	143	144	...	144	Rs. 100 ditto.
46		Kharee Rungran	205	229	172	57	Rs. 60 ditto.
47		Gaonree	324	215	...	215	Rs. 100 ditto.
48		Gungdhara, alias Mozoola Nugger.	144	97	...	97	No deduction necessary; assessment independent of Canal.
49		Gungdhara, alias Goonree ...	398	414	297	117	Rs. 100 allowed for Canal profits.
50		Ladpoor	385	403	23	380	Rs. 200 ditto.
51		Noona	413	330	...	330	Rs. 250 ditto.
52		Lisora Oomurpoor	240	268	...	268	Rs. 150 ditto.
53		Moobarikpoor	191	197	23	174	Rs. 60 ditto.
54		Mutharee	225	277	27	250	Rs. 60 ditto.
55		Mujahudpoor	209	222	22	200	Rs. 100 ditto.
56		Muhee-ood-deempore	161	157	...	157	Rs. 100 ditto.
57		Murh Kureempoor	499	531	23	508	Rs. 100 ditto.
58		Munsoorpoor	890	698	173	525	Rs. 350 ditto.
59		Humeedpoor Mokpoor ...	232	181	...	181	Rs. 100 ditto.
60		Munowurpoor	134	103	...	103	No deduction necessary; assessment independent of Canal.
61		Munowurpoor Muzra Naola,	95	64	...	64	No deduction ditto.
62		Naola	823	722	...	722	Rs. 300 allowed for Canal profits.
63		Yaheepoor	169	201	...	201	Rs. 100 ditto.
		Total ...	16,632	15,546	2,131	13,415	Rs. 6,943, Canal profits.

The average depth of water is 17 to 18 feet; in many places kutchas wells can be dug; note has been taken of this natural capability when assessing each village; there are other villages, again, where clay is entirely absent; and, owing to sandy substrata, kutchas wells cannot possibly be dug. I have closely examined each village; wherever Mr. Grant's assessments appeared below half assets, and the village had ordinary natural capability for digging wells, very little allowance has been made for canal profits. The jumma of this pergunnah is Rs. 66,311; canal profits only Rs. 6,943. This is owing to the facility of well irrigation.

S. N. MARTIN,

Collector.

PERGUNNAH

Statement shewing Profits due to the

1.	2.	3.				
Number.	Name of Mouzah.	AREA IRRIGATED BY CANAL.				
		Meesun.	Roslee.	Dakur.	Bhoor.	Total.
1	Burla Jut ...	23	167	...	...	190
2	Bulwa Puttee Mosulmanan ...	145	282	...	...	427
3	Ditto Puttee Hindwan ...	113	123	...	...	236
4	Bamnolee ...	74	61	43	...	178
5	Tajpoor, alias Sumbhalka ...	131	179	...	...	310
6	Titoulee ...	128	507	8	...	643
7	Jhal Puttee Guthwala ...	51	146	3	2	202
8	Ditto Puttee Khurb... ...	...	12	...	...	12
9	Seekundra ...	64	266	8	...	338
10	Sehnta Puttee Goomanee ...	...	30	...	...	30
11	Shamlee Puttee Ghasee Ram ...	151	168	3	...	322
12	Ditto Puttee Bhugwan Singh ...	169	158	15	...	342
13	Ditto Puttee Jowahir Singh ...	72	217	5	...	294
14	Ditto Puttee Mehuldarpooora ...	43	174	...	...	217
15	Shekhoopoor ...	30	60	12	...	102
16	Kusserwa Khoord ...	29	78	12	...	119
17	Kusserwa Kullan ...	228	156	30	10	424
18	Kherree Kurmoon ...	217	454	148	...	819
19	Gurh Shaishtpoor ...	43	36	29	...	108
20	Gogurpoor ...	32	121	...	...	153
21	Leloun ...	146	569	22	1	738
22	Moondet ...	42	162	63	...	267
Total, Chuk Shamlee ...		1,931	4,126	401	13	6,471
1	Budheo ...	15	153	8	...	176
2	Bhainswal ...	452	599	739	...	1,790
3	Jundheree ...	2	130	88	...	230
4	Dhunvena ...	21	96	27	...	144
5	Sulawur... ...	196	383	124	...	703
6	Kurroree ...	91	202	83	...	376
7	Kunnookhera ...	126	584	80	...	790
8	Gohurnee ...	177	248	329	...	754
9	Mehrumpoor ...	21	138	8	...	167
10	Niamut-oollahpoor ...	11	36	23	...	70
Total, Chuk Bhainswal ...		1,112	2,569	1,509	...	5,190
1	Babree Mehal Baluk Ram ...	15	143	9	...	167
2	Ditto Mehal Nuwab ...	...	3	...	...	3
3	Bunut Puttee Ramzan Ali ...	15	149	8	...	172
4	Ditto Puttee Sowae Singh ...	45	124	17	...	186
5	Ditto Puttee Seelaput ...	14	34	12	...	60
6	Ditto Puttee Mohur Singh ...	16	64	15	...	95
7	Bunhera... ...	3	47	1	...	51
8	Sonta ...	308	413	99	...	820
Total, Chuk Koodana ...		416	977	161	...	1,554
1	Bootrara Puttee Afghanan ...	34	83	18	...	135
2	Ditto Puttee Jātān ...	29	63	26	...	118
3	Khanpoor ...	210	185	27	...	422
4	Sikka ...	54	447	32	...	533
5	Kyree ...	...	3	...	...	3
6	Mehdoodpoor Afghanan ...	...	21	30	...	51
7	Ditto Jātān ...	...	48	5	...	53
8	Muhabutpoor ...	26	38	13	...	77
Total, Chuk Bunttee Khara ...		353	888	151	...	1,392
GRAND TOTAL ...		3,812	3,560	2,222	13	14,607

SHAMLEE.

operation of the Eastern Jumna Canal.

4.				5.				
REVENUE RATE PER IRRIGATED ACRE.				REVENUE ON IRRIGATED AREA.				
Meesun.	Roslee.	Dakur.	Bhoor.	Meesun.	Roslee.	Dakur.	Bhoor.	Total.
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
3 9 6	3 0 0	1 14 11½	1 0 3½	82 11 0	501 0 0	...	...	583 11 0
				521 2 0	846 0 0	...	...	1,867 2 0
				406 2 0	369 0 0	...	...	775 2 0
				265 15 0	183 0 0	83 4 0	...	532 3 0
				470 13 0	537 0 0	...	...	1,007 13 0
				460 0 0	1,521 0 0	15 8 0	...	1,996 8 0
				183 4 0	438 0 0	5 13 0	2 1 0	629 2 0
				...	36 0 0	...	...	36 0 0
				230 0 0	798 0 0	15 8 0	...	1,043 8 0
				...	90 0 0	...	...	90 0 0
				542 10 0	504 0 0	5 13 0	...	1,052 7 0
				607 5 0	474 0 0	29 1 0	...	1,110 6 0
				258 12 0	651 0 0	9 11 0	...	919 7 0
				154 8 0	522 0 0	...	...	676 8 0
				107 13 0	180 0 0	23 4 0	...	311 1 0
				104 4 0	234 0 0	23 4 0	...	361 8 0
				819 6 0	468 0 0	58 1 0	10 3 0	1,355 10 0
				779 14 0	1,362 0 0	286 9 0	...	2,428 7 0
				154 8 0	108 0 0	56 2 0	...	318 10 0
				115 0 0	363 0 0	...	...	478 0 0
				524 11 0	1,707 0 0	42 10 0	1 0 0	2,275 5 0
				150 15 0	486 0 0	122 0 0	...	758 15 0
...	...	...	...	6,939 9 0	12,378 0 0	776 8 0	13 4 0	20,107 5 0
4 2 0	2 6 0	3 12 0	1 1 6	61 14 0	363 6 0	30 0 0	...	455 4 0
				1,864 8 0	1,422 10 0	2,771 4 0	...	6,058 6 0
				8 4 0	308 12 0	330 0 0	...	647 0 0
				86 10 0	228 0 0	101 4 0	...	415 14 0
				808 8 0	909 10 0	465 0 0	...	2,183 2 0
				375 6 0	479 12 0	311 4 0	...	1,166 6 0
				519 12 0	1,387 0 0	300 0 0	...	2,206 12 0
				730 2 0	589 0 0	1,233 12 0	...	2,552 14 0
				86 10 0	327 12 0	30 0 0	...	444 6 0
				45 6 0	85 8 0	86 4 0	...	217 2 0
...	...	...	...	4,587 0 0	6,101 6 0	5,658 12 0	...	16,347 2 0
4 5 6½	3 3 3	2 3 3	1 15 9	65 3 0	458 1 0	19 13 0	...	543 1 0
				...	9 10 0	...	...	9 10 0
				65 3 0	477 4 0	17 10 0	...	560 1 0
				195 9 0	397 3 0	37 7 0	...	630 3 0
				60 14 0	108 14 0	26 7 0	...	196 3 0
				69 9 0	205 0 0	33 1 0	...	307 10 0
				13 1 0	150 9 0	2 8 0	...	165 13 0
				1,338 11 0	1,322 14 0	218 2 0	...	2,879 11 0
			
			
...	...	...	...	1,808 2 0	3,129 7 0	354 11 0	...	5,292 4 0
3 8 0	2 5 6	1 12 0	0 14 0	119 0 0	194 9 0	31 8 0	...	345 1 0
				101 8 0	147 11 0	45 8 0	...	294 11 0
				735 0 0	433 10 0	47 4 0	...	1,215 14 0
				189 0 0	1,047 11 0	56 0 0	...	1,292 11 0
				...	7 1 0	...	...	7 1 0
				...	49 3 0	52 8 0	...	101 11 0
				...	112 8 0	8 12 0	...	121 4 0
...	...	...	...	91 0 0	89 1 0	22 11 0	...	202 13 0
...	...	...	...	1,295 8 0	2,081 6 0	264 4 0	...	3,581 2 0
...	...	...	...	14,570 3 0	23,690 3 0	7,054 3 0	13 4 0	45,327 13 0

PERGUNNAH

Statement showing Profits due to the operation

1.	2.	6.								
Number.	Name of Mouzah.	REVENUE RATE PER UNIRRIGATED ACRE.								
		Meesun.			Roslec.		Dakur.		Bhoor.	Meesun.
		Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.
1	Burla Jut ...									47 11 0
2	Bulwa Puttee Mosulmanan ...									300 9 0
3	Ditto Puttee Hindwan ...									234 4 0
4	Bamnolee ...									153 6 0
5	Tajpore, <i>alias</i> Sumbhalka ...									271 9 0
6	Titoulee ...									265 5 0
7	Jhal Puttee Guthwala ...									105 12 0
8	Ditto Puttee Khurb... ..									...
9	Seekundra ...									132 11 0
10	Sehnta Puttee Goomanee ...									...
11	Shamlee Puttee Ghasee Ram ...	2	1	2	2	1	2	1	7	10 12 0
12	Ditto Puttee Bhugwan Singh ...									350 5 0
13	Ditto Puttee Jowahir Singh ...									149 4 0
14	Ditto Puttee Mehuldarpoora ...									89 2 0
15	Shekhoopoor ...									62 3 0
16	Kusserwa Khoord ...									60 2 0
17	Kusserwa Kullan ...									472 10 0
18	Kheres Kurmoon ...									449 13 0
19	Gurh Shaishtpoor ...									89 2 0
20	Gogurpoor ...									66 5 0
21	Leloun ...									302 10 0
22	Moondet ...									87 1 0
	Total, Chuk Shamlee ...	...			...			...		4,002 12 0
1	Budheo ...									26 4 0
2	Bhainswal ...									791 0 0
3	Jundharee ...									3 8 0
4	Dhunna ...									36 12 0
5	Sulawur ...	1	12	0	1	12	0	2	10	0 13 7
6	Kurroree ...									343 0 0
7	Kannookhera ...									159 4 0
8	Gohurnee ...									220 8 0
9	Mehrumpoor ...									309 12 0
10	Niamut-oollahpoor ...									36 12 0
	Total, Chuk Bhainswal ...	...			...			...		1,946 0 0
1	Babree Mehal Baluk Ram ...									35 10 0
2	Ditto Mehal Nuwab... ..									...
3	Bunut Puttee Rumzan Ali ...									35 10 0
4	Ditto Puttee Sowae Singh ...	2	6	0	2	6	0	1	12	8 0 15 5½
5	Ditto Puttee Seelaput ...									106 14 0
6	Ditto Puttee Mohur Singh ...									33 4 0
7	Bunhera ...									38 0 0
8	Sonta ...									7 2 0
	Total, Chuk Koodana ...	...			...			...		731 8 0
	Total, Chuk Koodana ...	...			...			...		988 0 0
1	Bootrara Puttee Afghanan ...									57 6 0
2	Ditto Puttee Jātān ...									48 15 0
3	Khanpoor ...									354 6 0
4	Sikka ...	1	11	0	1	11	0	1	6	0 10 0
5	Kyree ...									91 4 0
6	Mehdoodpoor Afghanan ...									...
7	Ditto Jātān ...									...
8	Muhabutpoor ...									43 14 0
	Total, Chuk Bunttee Khara ...	...			...			...		...
	Total, Chuk Bunttee Khara ...	...			...			...		595 11 0
	GRAND TOTAL ...	...			...			...		7,532 7 0

SHAMLEE.

of the Eastern Jumna Canal.—(Continued.)

7.				8.	9.
REVENUE ON UNIRRIGATED AREA.				Difference of Revenue between irrigated and unirrigated rates.	Number of wells closed by Canal.
Roslee.	Dakur.	Bhoor.	Total.		
Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	
346 3 0	...	...	393 14 0	189 13 0	...
584 9 0	...	...	885 2 0	482 0 0	5
255 0 0	...	...	489 4 0	285 14 0	10
126 7 0	62 1 0	...	341 14 0	190 5 0	1
371 1 0	...	...	642 10 0	365 3 0	...
1,050 15 0	11 9 0	...	1,327 13 0	668 11 0	...
302 10 0	4 5 0	1 8 0	414 3 0	214 15 0	2
24 14 0	...	...	24 14 0	11 2 0	...
551 6 0	11 9 0	...	695 10 0	347 14 0	4
62 3 0	...	...	62 3 0	27 13 0	...
348 4 0	4 5 0	...	665 9 0	386 14 0	9
327 8 0	21 10 0	...	699 7 0	410 15 0	15
449 13 0	7 3 0	...	606 4 0	313 3 0	2
360 11 0	...	...	449 13 0	226 11 0	6
424 6 0	17 5 0	...	203 14 0	107 3 0	...
161 11 0	17 5 0	...	239 2 0	122 6 0	...
323 6 0	43 5 0	7 8 0	846 13 0	508 13 0	2
941 2 0	213 8 0	...	1,604 7 0	824 0 0	10
74 10 0	41 13 0	...	205 9 0	113 1 0	...
250 13 0	...	...	317 2 0	160 14 0	1
1,179 8 0	31 12 0	0 12 0	1,514 10 0	760 11 0	5
335 13 0	90 14 0	...	513 12 0	245 3 0	...
8,552 13 0	578 8 0	9 12 0	13,143 13 0	6,963 8 0	72
267 12 0	21 0 0	...	315 0 0	140 4 0	...
1,048 4 0	1,939 14 0	...	3,779 2 0	2,279 4 0	13
227 8 0	231 0 0	...	462 0 0	185 0 0	...
168 0 0	70 14 0	...	275 10 0	140 4 0	...
670 4 0	325 8 0	...	1,338 12 0	844 6 0	...
353 8 0	217 14 0	...	730 10 0	435 12 0	5
1,022 0 0	210 0 0	...	1,452 8 0	754 4 0	4
434 0 0	863 10 0	...	1,607 6 0	945 8 0	9
241 8 0	21 0 0	...	299 4 0	145 2 0	...
63 0 0	60 6 0	...	142 10 0	74 8 0	...
4,495 12 0	3,961 2 0	...	10,402 14 0	5,944 4 0	31
339 10 0	16 2 0	...	391 6 0	151 11 0	7
7 2 0	...	...	7 2 0	2 8 0	...
353 14 0	14 5 0	...	403 13 0	156 4 0	5
294 8 0	30 7 0	...	431 13 0	198 6 0	1
80 12 0	21 8 0	...	135 8 0	60 11 0	1
152 0 0	26 14 0	...	216 14 0	90 12 0	...
111 10 0	1 13 0	...	120 9 0	45 4 0	...
98 14 0	177 6 0	...	1,889 12 0	989 15 0	15
2,320 6 0	288 7 0	...	3,596 13 0	1,695 7 0	29
140 1 0	24 12 0	...	222 3 0	122 14 0	...
106 5 0	35 12 0	...	191 0 0	103 11 0	...
312 3 0	37 2 0	...	703 11 0	512 3 0	3
754 5 0	44 0 0	...	889 7 0	403 4 0	8
5 1 0	...	...	5 1 0	2 0 0	...
35 7 0	41 4 0	...	76 11 0	25 0 0	...
81 0 0	6 14 0	...	87 14 0	83 6 0	...
64 2 0	17 14 0	...	125 14 0	76 15 0	...
1,498 8 0	207 10 0	...	2,301 13 0	1,279 5 0	11
16,867 7 0	5,035 11 0	9 12 0	29,445 5 0	15,882 8 0	143

PERGUNNAH

Statement showing Profits due to the operation

1. Number.	2.				10.				
	Name of Mouzah.				TWENTY-TWO ACRES ALLOWED TO EACH WELL.				
					Meesun.	Roslee.	Dakur.	Bhoor.	Total.
1	Burla Jut	...	...	...	...	...	...	...	...
2	Bulwa Puttee Mosulmanan	...	...	...	67	131	...	...	198
3	Ditto Puttee Hindwan	...	...	...	105	115	...	...	220
4	Bamnolee	...	...	...	9	8	5	...	22
5	Tajpore, alias Sumbhalka	...	...	...	...	...	...	...	...
6	Titoulee	...	...	...	...	...	...	...	...
7	Jhal Puttee Guthwala	...	...	...	11	32	1	...	44
8	Ditto Puttee Khurb	...	...	...	...	...	...	...	...
9	Seekundra	...	...	...	17	69	2	...	88
10	Sehnta Puttee Goomanee	...	...	...	...	...	...	...	...
11	Shamlee Puttee Ghasee Ram	...	...	...	93	103	2	...	198
12	Ditto Puttee Bhugwan Singh	...	...	...	163	152	15	...	330
13	Ditto Puttee Jowahir Singh	...	...	...	11	32	1	...	44
14	Ditto Puttee Mehuldarpooora	...	...	...	26	106	...	...	132
15	Shekhopore	...	...	...	...	...	...	...	...
16	Kusserwa Khoord	...	...	...	...	...	...	...	...
17	Kusserwa Kullan	...	...	...	24	16	3	1	44
18	Kherree Kurmoon	...	...	...	58	122	40	...	220
19	Gurh Shaishtpoor	...	...	...	...	...	...	...	...
20	Gogurpoor	...	...	...	5	17	...	...	22
21	Leloun	...	...	...	22	85	3	...	110
22	Moondet	...	...	...	...	...	...	...	...
	Total, Chuk Shamlee	...	...	...	611	988	72	1	1,672
1	Budheo	...	...	...	...	...	...	...	...
2	Bhainswal	...	...	...	72	96	118	...	286
3	Jundharee	...	...	...	...	...	...	...	...
4	Dhunna	...	...	...	...	...	...	...	...
5	Sulawur	...	...	...	...	...	...	...	...
6	Kurroree	...	...	...	27	59	24	...	110
7	Kannookhera	...	...	...	14	65	9	...	88
8	Gohurnee	...	...	...	62	87	115	...	264
9	Mehrumpore	...	...	...	...	...	...	...	...
10	Niamut-collahpoor	...	...	...	...	...	...	...	...
	Total, Chuk Bhainswal	...	...	...	175	307	266	...	748
1	Babree Mehal Baluk Ram	...	...	...	14	132	8	...	154
2	Ditto Mehal Nuwab	...	...	...	...	...	...	...	...
3	Bunat Puttee Rumzan Ali	...	...	...	13	134	7	...	154
4	Ditto Puttee Sawae Singh	...	...	...	6	15	1	...	22
5	Ditto Puttee Seelaput	...	...	...	5	13	4	...	22
6	Ditto Puttee Mohur Singh	...	...	...	...	...	...	...	...
7	Bunhera	...	...	...	...	...	...	...	...
8	Sonta	...	...	...	124	166	40	...	330
	Total, Chuk Koodana	...	...	...	162	460	60	...	682
1	Bootrara Puttee Afghanan	...	...	...	...	...	...	...	...
2	Ditto Puttee Jatan	...	...	...	...	...	...	...	...
3	Khanpore	...	...	...	33	29	4	...	66
4	Sikka	...	...	...	20	166	12	...	198
5	Kyree	...	...	...	...	...	...	...	...
6	Mehdoodpoor Afghanan	...	...	...	...	...	...	...	...
7	Ditto Jatan	...	...	...	...	...	...	...	...
8	Muhabatpore	...	...	...	...	...	...	...	...
	Total, Chuk Bunttee Khara	...	...	...	53	195	16	...	264
	GRAND TOTAL	...	...	...	1,001	1,950	414	1	3,365

SHAMLEE.

of the Eastern Jumna Canal.—(Continued.)

11.					12.				
REVENUE DERIVABLE FROM WELL-IRRIGATION.					REVENUE ON WELL-IRRIGATED AREA BY DRY RATE.				
Meesun.	Roalee.	Dakur.	Bhoor.	Total.	Meesun.	Roalee.	Dakur.	Bhoor.	Total.
Rs. As. P.	Rs. As. P.	Rs. As. P.	R A P	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	R A P	Rs. As. P.
...
240 13 0	393 0 0	...	...	633 13 0	138 14 0	271 8 0	...	...	410 6 0
377 5 0	345 0 0	...	...	722 5 0	217 11 0	238 6 0	...	...	456 1 0
32 6 0	24 0 0	9 11 0	...	66 1 0	18 10 0	16 9 0	7 3 0	...	42 6 0
...
39 9 0	96 0 0	1 15 0	...	137 8 0	22 13 0	66 5 0	1 7 0	...	90 9 0
...
61 2 0	207 0 0	3 14 0	...	272 0 0	35 4 0	143 1 0	2 14 0	...	181 3 0
...
334 3 0	309 0 0	3 14 0	...	647 1 0	192 13 0	213 8 0	2 14 0	...	409 3 0
584 12 0	456 0 0	29 1 0	...	1,070 13 0	337 14 0	315 1 0	21 10 0	...	674 9 0
39 8 0	96 0 0	1 15 0	...	137 7 0	22 13 0	66 5 0	1 7 0	...	90 9 0
93 7 0	318 0 0	...	...	411 7 0	53 14 0	219 12 0	...	...	273 10 0
...
86 4 0	48 0 0	5 13 0	1 0 0	141 1 0	49 12 0	33 3 0	4 5 0	0 12 0	88 0 0
208 7 0	366 0 0	77 7 0	...	651 14 0	120 4 0	252 14 0	57 11 0	...	430 13 0
...
18 0 0	51 0 0	...	...	69 0 0	10 6 0	35 4 0	...	...	45 10 0
70 1 9	255 0 0	5 13 0	...	339 14 0	45 10 0	176 3 0	4 5 0	...	226 2 0
...
2,195 13 0	2,964 0 0	139 7 0	1 0 0	5,300 4 0	1,266 10 0	2,047 15 0	103 12 0	0 12 0	3,419 1 0
...
297 0 0	228 0 0	442 8 0	...	967 8 0	126 0 0	168 0 0	309 12 0	...	603 12 0
...
...
111 6 0	140 2 0	90 0 0	...	341 8 0	47 4 0	103 4 0	63 0 0	...	213 8 0
57 12 0	154 6 0	33 12 0	...	245 14 0	24 8 0	113 12 0	23 10 0	...	161 14 0
255 12 0	206 10 0	431 4 0	...	893 10 0	108 8 0	152 4 0	301 14 0	...	562 10 0
...
...
721 14 0	729 0 0	997 8 0	...	2,448 8 0	306 4 0	537 4 0	698 4 0	...	1,541 12 0
...
60 12 0	422 13 0	17 10 0	...	501 3 0	33 4 0	313 8 0	14 5 0	...	361 1 0
...
56 8 0	439 4 0	15 7 0	...	501 5 0	30 14 0	318 4 0	12 9 0	...	361 11 0
26 1 0	48 1 0	2 3 0	...	76 5 0	14 4 0	35 10 0	1 13 0	...	51 11 0
21 12 0	41 10 0	8 13 0	...	72 3 0	11 14 0	30 14 0	7 3 0	...	49 15 0
...
...
538 15 0	531 12 0	88 12 0	...	1,158 13 0	294 8 0	394 4 0	71 11 0	...	760 7 0
...
704 2 0	1,473 8 0	132 3 0	...	2,309 13 0	384 12 0	1,092 8 0	107 9 0	...	1,584 13 0
...
...
115 8 0	68 0 0	7 0 0	...	190 8 0	55 11 0	48 15 0	5 8 0	...	110 2 0
70 0 0	389 1 0	21 0 0	...	480 1 0	33 12 0	280 2 0	16 8 0	...	330 6 0
...
...
...
...
195 8 0	457 1 0	28 0 0	...	670 9 0	89 7 0	329 1 0	22 0 0	0 12 0	440 8 0
3,807 5 0	5,623 11 0	1,297 2 0	1 0 0	10,729 2 0	2,047 1 0	4,006 12 0	931 9 0	...	6,986 2 0

PERGUNNAH

Statement showing Profits due to the operation

1.	2.	13.	14.
No.	Name of Mouzah.	Difference of Revenue on area irrigated by wells.	Actual profits due to Canal.
		Rs. As. P.	Rs. As. P.
1	Burla Jut ...	...	189 13 0
2	Bulwa Puttee Mosulmanan ...	223 7 0	258 9 0
3	Ditto Puttee Hindwan ...	266 4 0	19 10 0
4	Bamnolee ...	23 11 0	166 10 0
5	Tajpoor, alias Sumbhalika ...	...	363 3 0
6	Titoulee ...	...	668 11 0
7	Jhal Puttee Guthwala ...	46 15 0	168 0 0
8	Ditto Puttee Khurb ...	...	11 2 0
9	Seekundra ...	90 13 0	257 1 0
10	Sehuta Puttee Goomanee ...	...	27 13 0
11	Shamlee Puttee Ghasee Ram ...	237 14 0	149 0 0
12	Ditto Puttee Bhugwan Singh ...	396 4 0	14 11 0
13	Ditto Puttee Jowahir Singh ...	46 14 0	266 5 0
14	Ditto Puttee Mehuldarpoora ...	137 13 0	88 14 0
15	Shakhoooor ...	...	107 3 0
16	Kusserwa Khoord ...	...	122 6 0
17	Kusserwa Kullian ...	53 1 0	455 12 0
18	Kherao Kurmoon ...	221 1 0	602 15 0
19	Gurh Shaishtpoor ...	...	113 1 0
20	Gogurpoor ...	23 6 0	137 8 0
21	Leloun ...	113 12 0	646 15 0
22	Moondet ...	...	245 3 0
Total, Chuk Shamlee ...		1,881 3 0	5,082 5 0
1	Budheo ...	...	140 4 0
2	Bhainswal ...	363 12 0	1,915 8 0
3	Jundheree ...	...	185 0 0
4	Dhunna ...	...	140 4 0
5	Sulawur ...	...	844 6 0
6	Kurroree ...	128 0 0	307 12 0
7	Kannookhera ...	84 0 0	670 4 0
8	Gohurnee ...	331 0 0	614 8 0
9	Mehrumpoor ...	...	145 2 0
10	Niamat-collapsee ...	...	74 8 0
Total, Chuk Bhainswal ...		906 12 0	5,037 8 0
1	Babree Mehal Baluk Ram ...	140 2 0	11 9 0
2	Ditto Mehal Nuwab ...	...	2 8 0
3	Bunat Puttee Rumzan Ali ...	139 10 0	16 10 0
4	Ditto Puttee Sawase Singh ...	24 10 0	173 12 0
5	Ditto Puttee Seelaput ...	22 4 0	38 7 0
6	Ditto Puttee Mohur Singh ...	...	90 12 0
7	Bunhera ...	...	45 4 0
8	Sonta ...	398 6 0	591 9 0
Total, Chuk Koodana ...		725 0 0	970 7 0
1	Bootrara Puttee Afghanan ...	...	122 14 0
2	Ditto Puttee Jatan ...	...	103 11 0
3	Khanpoor ...	80 6 0	431 13 0
4	Sikka ...	149 11 0	263 9 0
5	Kyree ...	...	2 0 0
6	Mehdoopoor Afghanan ...	...	25 0 0
7	Ditto Jatan ...	...	33 6 0
8	Muhabutpoor ...	...	76 15 0
Total, Chuk Buntce Khara ...		230 1 0	1,049 4 0
GRAND TOTAL ...		3,743 0 0	12,139 8 0

SHAMLEE.

of the Eastern Jumna Canal.—(Concluded.)

15.

Remarks.

Mr. Colvin holds the opinion that unirrigated 'Meesun' is no better than unirrigated 'Roslee'; it is only when 'Roslee' is irrigated and named that it becomes 'Meesun'; the difference between unirrigated Meesun and Roslee is very slight. In Chuk Bhainswal Dakur produces two crops,—1st, Dhan (rice); 2nd crop, gram; hence rent-rate higher than Roslee.

The total cultivated area in this pergunnah is 45,455 acres.

Wells being numerous in this pergunnah, the high average of one well to 22 acres might be allowed. This would make the number of wells 2,066, of which there are already 747 masonry wells, the balance 1,319 must be reckoned as *kutcha* wells—giving 18 acres of irrigation to a masonry, and 15 acres to a *kutcha* well, the account will stand thus:—

747 masonry wells $\times 18 = 13,446$ acres of irrigation.
1319 *kutcha* ditto $\times 15 = 19,785$ ditto.

			Rs. As. P.	
Total	...	33,231 acres of irrigation	$\times 291$	
		Average Revenue rate of circles,		Rs. As. P.
Balance	...	12,224 acres unirrigated	$\times 162\frac{1}{2}$	= 85,327 8 3
		Average Revenue rate	...	= 16,951 4 0
		Total Pergunnah Jumma	...	= 1,02,278 12 3
		Jumma assessed	...	= 1,20,057 0 0
Difference due to canal were this average pergunnah				
account to be accepted, which of course is liable to				
variation when tested mouzahwar				
	...	...	...	17,778 3 9
Amount of canal profits by first estimate very much				
below above				
	...	...	...	12,139 8 0
By second estimate under directions of Senior Member,				
Board of Revenue				
	...	...	...	5,107 0 0

The reason of the smallness of canal profits is, as a rule, water is very close to the surface.

I have not made any estimate for lands that might be thrown out of cultivation were the canal to be closed as I really have no data to go upon. I hold that the increase of population will of necessity keep up the cultivation to the full mark, or nearly so; food must be procured for a crowded population, and this can only be done by utilising every acre of culturable land.

Total deduction allowed, Rs. 5,107.

S.-N. MARTIN,
Collector.

Abstract of Statement A.

B.

No.	Pergunnah.	Name of Mouzah.	Area irrigated by Canal.	Difference of Revenue between irrigated and unirrigated rates.	Difference of Revenue on area irrigated by wells.	Actual profits due to Canal.	Remarks.
				Rs.	Rs.	Rs.	
1	SHAMLEE.	Burla Jut	190	190	...	190	Ra. 100 allowed for canal profits; water on high lands distant 30 feet.
2		Bulwa Puttee Mosulmanan	427	482	223	259	Ra. 100 canal profits.
3		Bulwa Puttee Hindwan,	236	286	266	20	Ra. 20 ditto.
4		Bamnolee	178	190	24	166	Ra. 152 ditto.
5		Tajpoor, alias Sumbhalka,	310	365	...	365	Ra. 300 ditto.
6		Titoulee	643	669	...	669	Ra. 200 ditto.
7		Jhal Puttee Guthwala...	202	215	47	168	Ra. 100 ditto.
8		Jhal Puttee Khurb ...	12	11	...	11	No deduction necessary; canal irrigation trifling.
9		Seekundra	338	348	91	257	Ditto ditto, jumma low.
10		Sehnta Puttee Goomanee,	30	28	...	28	Ditto ditto ditto.
11		Shamlee Puttee Ghasee Ram	322	387	238	149	No deduction; water close to the surface.
12		Ditto Puttee Bhugwan Singh	342	411	396	15	Ditto ditto ditto.
13		Ditto Puttee Jowahur Singh	294	313	47	266	Ditto ditto ditto.
14		Ditto Puttee Mehuldarpoora	217	227	138	89	Ditto ditto ditto.
15		Shekhoopoor	102	107	...	107	Ra. 51 canal profits.
16		Kusserwa Khoord ...	119	122	...	122	No deduction; great natural capability.
17		Kusserwa Kullan ...	424	509	53	456	Ra. 213 allowed for canal profits.
18		Kheree Kurmoon ...	819	824	221	603	Ra. 297 ditto.
19		Gurh Shaishtpoor ...	108	113	...	113	Ra. 50 the outside that ought to be allowed.
20		Gogurpoor	153	161	23	138	Ra. 73 canal profits.
21		Leloun	738	761	114	647	Ra. 275 ditto.
22		Moondet	267	245	...	245	No reduction necessary; water close to the surface.
		Total, Chuk Shamlee...	6,471	6,964	1,881	5,083	
1		Budheo	176	140	...	140	Ra. 100 canal profits.
2		Bhainswal	1,790	2,279	364	1,915	No deduction allowed; water close to the surface.
3		Jundheree	220	185	...	185	Do.; jumma below deduced rates.
4		Dhunvena	144	140	...	140	Ra. 140 allowed as canal profits.
5		Salawur	703	844	...	844	Ra. 400 ditto.
6		Kuroree	376	436	128	308	Ra. 200 ditto.
7		Kunnookhera	790	754	84	670	Ra. 324 ditto.

Abstract of Statement A.—(Concluded.)

B.

No.	Pergunnah.	Name of Mouzah.	Area irrigated by Canal.	Difference of Revenue between irrigated and unirrigated rates.	Difference of Revenue on area irrigated by wells.	Actual profits due to Canal.	Remarks.
				Ra.	Ra.	Ra.	
8	SHAMLEH—(Concluded.)	Gohurnee	754	946	331	615	Ra. 300 allowed as canal profits.
9		Mehrumoor	167	145	...	145	Ra. 136 ditto.
10		Niamut-oollahpoor ...	70	75	...	75	Ra. 50 ditto.
		Total, Chuk Bhainswal,	5,190	5,944	907	5,037	
1		Babree Mehal Balukram,	167	152	140	12	No deduction necessary ; great natural capabilities.
2		Ditto Mehal Nuwab ...	3	2	...	2	Items below Rs. 10 disallowed.
3		Bunut Puttee Rumsan Ali	172	156	140	16	Ra. 16 allowed for canal profits after deducting all possible irrigation.
4		Ditto Puttee Sawace Singh	186	198	25	173	Ra. 100 canal profits; jumma short of full half assets.
5		Ditto Puttee Selaput ...	60	61	22	39	No deduction necessary.
6		Ditto Puttee Mohur Singh	95	91	...	91	Ra. 60 canal profits.
7		Bunhera	51	45	...	45	Ra. 47 ditto.
8		Sonta	820	990	398	592	Ra. 407 ditto.
		Total, Chuk Koodana...	1,554	1,695	725	970	
1		Bootrara Puttee Afghanan	135	123	...	123	Ra. 100 allowed for canal profits ; no <i>kutchas</i> wells.
2		Ditto Puttee Jâtân,	118	104	...	104	Ra. 100 ditto.
3		Khanpore	422	512	80	432	Ra. 350 ditto.
4		Sikka	533	403	150	253	Ra. 200 ditto.
5		Kyree	3	2	...	2	Items below Rs. 10 disallowed.
6		Mehdoodpoor Afghanan,	51	25	...	25	No deduction necessary ; jumma below deduced rates.
7		Ditto Jâtân	53	33	...	33	Ditto ditto.
8		Muhabutpoor	77	77	...	77	Ra. 76 canal profits.
		Total, Chuk Buntée Khara,	1,392	1,279	230	1,049	
		GRAND TOTAL ...	14,607	15,882	3,743	12,139	Total allowed, Rs. 5,107.

S. N. MARTIN,
Collector.

PERGUNNAH

Statement showing Profits due to the

1.	2.	3.				
		AREA IRRIGATED BY CANAL.				
		Meesun.	Roalee.	Dakur.	Bhoor.	Total.
No.	Name of Mouzah.					
1	Aldee, Puttee Nanuk Chund ...	25	350	2	...	377
2	Ditto, ditto Byjnath ...	9	227	17	...	253
3	Ditto, ditto Sudasookh ...	22	260	27	...	309
4	Alum, ditto Khoord ...	171	514	62	...	747
5	Ditto, ditto Kullian ...	283	311	191	...	785
6	Bunehra ...	137	187	16	...	340
7	Buharsee ...	225	351	21	...	597
8	Khowaspoor ...	86	276	41	...	403
9	Dangrore ...	180	205	151	...	536
10	Rampoor Kharee, Puttee Bunseedhur...	127	179	20	...	326
11	Ditto ditto, ditto Gosanee ...	53	72	29	...	154
12	Shahpoor ...	31	235	50	...	316
13	Soona ...	38	184	3	...	225
14	Tahurpoor Bhubheesa ...	452	577	6	...	1,035
15	Futtehpoor ...	24	194	56	...	274
16	Kandhla Mehal Muzbootta ...	259	812	170	...	1,241
17	Ditto ditto, 15 biswahs ...	664	1,637	354	...	2,655
18	Ditto ditto, Mootfurkat ...	81	263	48	...	392
19	Ditto ditto, 5 biswahs...	73	139	23	...	235
20	Kewana ...	54	141	42	...	237
21	Kunyan ...	175	185	7	...	367
22	Goojurpoor ...	50	121	13	...	184
23	Mutnaolee ...	67	119	26	...	212
24	Mulukpoor ...	46	147	152	...	345
25	Meemila ...	72	366	14	...	452
26	Nala ...	489	468	125	...	1,082
27	Hurmuzpoor ...	137	108	5	...	250
	Total, Chuk Kandhla ...	4,030	8,628	1,671	...	14,329
1	Asudpoor ...	25	129	15	...	169
2	Ambehta ...	23	240	74	...	337
3	Busse ...	30	94	...	...	124
4	Bamnolee ...	38	153	80	...	271
5	Bhogurpoor ...	10	48	43	...	101
6	Churhoo ...	120	213	2	...	335
7	Doondoo Khara ...	95	432	31	...	558
8	Doodahur ...	7	117	...	...	124
9	Eapoor, Puttee Sheroo ...	25	170	13	...	208
10	Ditto, ditto Dhun Singh ...	2	90	...	...	92
11	Qasimpoor ...	49	183	40	...	272
12	Koortan ...	90	575	40	...	705
13	Kasolee ...	87	671	71	...	829
14	Gungairoo, Puttee Sadat ...	81	1,836	116	...	2,033
15	Ditto, ditto Hindooan ...	26	183	23	...	232
16	Ditto, ditto Mosulmanan ...	1	104	...	...	105
	Total, Chuk Kyranah ...	709	5,238	548	...	6,495
1	Brim Khara, Puttee Lada ...	24	63	...	...	87
2	Ditto, ditto Ramdut ...	50	131	...	...	181
3	Pijokhara ...	108	272	195	...	575
4	Jusola ...	459	286	202	...	947
5	Chuk Doona Kharea ...	37	131	53	...	221
6	Russoolpoor ...	81	228	12	...	321
7	Salah Kharee ...	8	82	39	...	129
8	Fuzulpoor Khalsea ...	64	365	97	...	526
9	Ditto Lakhraj ...	42	223	32	...	297
10	Khindraolee, Puttee Hindooan ...	302	441	38	...	781
11	Ditto, ditto Mosulmanan ...	149	416	193	...	758
12	Lahoreepoor ...	89	51	68	...	208
	Total, Chuk Shamlee ...	1,413	2,689	929	...	5,031
	GRAND TOTAL ...	6,152	16,555	3,148	...	25,855

KANDHLA.

operation of the Eastern Jumna Canal.

4.				5.							
REVENUE RATE PER IRRIGATED ACRE.				REVENUE ON IRRIGATED AREA.							
Meesun.	Roslee.	Dakur.	Bhoor.	Meesun.	Roslee.	Dakur.	Bhoor.	Total.			
Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.			
4 4 0	3 6 0	3 0 0	1 15 9	106 4 0	1,181 4 0	6 0 0	...	1,293 8 0			
				38 4 0	766 2 0	51 0 0	...	855 6 0			
				93 8 0	877 8 0	81 0 0	...	152 0 0			
				726 12 0	1,734 12 0	186 0 0	...	2,647 8 0			
				1,202 12 0	1,049 10 0	573 0 0	...	2,825 6 0			
				582 4 0	631 2 0	48 0 0	...	1,261 6 0			
				956 4 0	1,184 10 0	63 0 0	...	2,203 14 0			
				365 8 0	931 8 0	123 0 0	...	1,420 0 0			
				765 0 0	691 14 0	453 0 0	...	1,909 14 0			
				539 12 0	604 2 0	60 0 0	...	1,203 14 0			
				225 4 0	243 0 0	87 0 0	...	555 4 0			
				131 12 0	793 2 0	150 0 0	...	1,074 14 0			
				161 8 0	621 0 0	9 0 0	...	791 8 0			
				1,921 0 0	1,947 6 0	18 0 0	...	3,886 6 0			
				102 0 0	654 12 0	168 0 0	...	924 12 0			
				1,100 12 0	2,740 8 0	510 0 0	...	4,351 4 0			
				2,822 0 0	5,524 14 0	1,062 0 0	...	9,408 14 0			
				344 4 0	887 10 0	144 0 0	...	1,375 14 0			
				310 4 0	469 2 0	69 0 0	...	848 4 0			
				229 8 0	475 14 0	126 0 0	...	831 6 0			
				743 12 0	624 6 0	21 0 0	...	1,389 2 0			
				212 8 0	408 6 0	39 0 0	...	659 14 0			
				284 12 0	401 10 0	78 0 0	...	764 6 0			
				195 8 0	496 2 0	456 0 0	...	1,147 10 0			
				306 0 0	1,235 4 0	42 0 0	...	1,583 4 0			
				2,078 4 0	1,579 8 0	375 0 0	...	4,032 12 0			
				582 4 0	364 8 0	15 0 0	...	961 12 0			
				17,127 8 0	29,119 8 0	5,013 0 0	...	51,260 0 0			
3 0 0	2 0 0	1 4 2	0 15 6	75 0 0	258 0 0	18 15 0	...	351 15 0			
				69 0 0	480 0 0	93 4 0	...	642 4 0			
				90 0 0	188 0 0	...	...	278 0 0	
				114 0 0	306 0 0	100 13 0	...	520 13 0			
				30 0 0	96 0 0	54 3 0	...	180 3 0			
				360 0 0	426 0 0	2 8 0	...	788 8 0			
				285 0 0	864 0 0	39 1 0	...	1,188 1 0			
				21 0 0	234 0 0	...	...	255 0 0	
				75 0 0	340 0 0	16 6 0	...	431 6 0			
				6 0 0	180 0 0	...	...	186 0 0	
				147 0 0	366 0 0	50 7 0	...	563 7 0			
				270 0 0	1,150 0 0	50 7 0	...	1,470 7 0			
				261 0 0	1,342 0 0	89 8 0	...	1,692 8 0			
				243 0 0	3,672 0 0	146 3 0	...	4,061 3 0			
				78 0 0	366 0 0	29 0 0	...	473 0 0			
				3 0 0	208 0 0	...	...	211 0 0	
				2,127 0 0	10,476 0 0	690 11 0	...	13,293 11 0			
3 0 6	3 0 0	1 14 11	1 0 3	86 4 0	189 0 0	...	...	275 4 0	
				179 11 0	393 0 0	...	...	572 11 0	
				388 2 0	816 0 0	377 9 0	...	1,581 11 0			
				1,649 9 0	858 0 0	391 2 0	...	2,898 11 0			
				133 0 0	393 0 0	102 10 0	...	628 10 0			
				291 0 0	684 0 0	23 4 0	...	998 6 0			
				28 12 0	246 0 0	75 8 0	...	350 4 0			
				230 0 0	1,095 0 0	87 13 0	...	1,512 13 0			
				150 15 0	669 0 0	61 15 0	...	881 14 0			
				1,085 5 0	1,323 0 0	73 9 0	...	2,481 14 0			
				535 8 0	1,248 0 0	373 11 0	...	2,157 8 0			
				319 15 0	153 0 0	131 11 0	...	604 10 0			
				5,078 3 0	8,067 0 0	1,798 12 0	...	14,943 15 0			
...				5,078 3 0	8,067 0 0	1,798 12 0	...	14,943 15 0
...	...	...	...	24,332 11 0	47,662 8 0	7,502 7 0	...	79,497 10 0

PERGUNNAH

Statement showing Profits due to the operation

1.	2.	6.				
No.	Name of Mouzah.	REVENUE RATE PER UNIRRIGATED ACRE.				REVENUE
		Meesun.	Roslee.	Dakur.	Bhoor.	Meesun.
		Ra. As. P.	Ra. As. P.	Ra. As. P.	Ra. As. P.	Ra. As. P.
1	Aldee, Puttee Nanuk Chund ...	} 2 9 0	} 2 9 0	} 2 0 0	} 0 15 5½	64 1 0
2	Ditto, ditto Byjnath ...					23 1 0
3	Ditto, ditto Sudasookh ...					56 6 0
4	Alum, ditto Khoord ...					438 3 0
5	Ditto, ditto Kullian ...					725 0 0
6	Bunehra ...					351 1 0
7	Buharsee ...					576 9 0
8	Khowaspoor ...					220 6 0
9	Dangrore ...					461 4 0
10	Rampoor Kharee, Puttee Bunseedhur...					325 7 0
11	Ditto ditto, ditto Gosanee ...					135 13 0
12	Shahpoor ...					79 7 0
13	Soona ...					97 6 0
14	Tahurpoor Bhubheesa ...					1,158 4 0
15	Futtehpoor ...					61 8 0
16	Kandhla Mehal Mazbootta ...					663 11 0
17	Ditto ditto, 15 biswahs ...					1,701 8 0
18	Ditto ditto Mootfurkat ...					207 9 0
19	Ditto ditto, 5 biswahs ...					187 1 0
20	Kewana ...					138 6 0
21	Kunyan ...					448 7 0
22	Goojurpoor ...					128 2 0
23	Mutnaolee ...					171 11 0
24	Mulukpoor ...					117 14 0
25	Meemla ...					184 8 0
26	Nala ...					1,253 1 0
27	Hurmuzpoor ...					351 1 0
Total, Chuk Kandhla ...		...	...	...	...	10,326 14 0
1	Asudpoor ...	} 1 6 0	} 1 6 0	} 1 0 2	} ...	34 6 0
2	Ambehta ...					31 10 0
3	Bussee ...					41 4 0
4	Bamnolee ...					52 4 0
5	Bhogurpoor ...					13 12 0
6	Churhoo ...					165 0 0
7	Doondoo Khara ...					130 10 0
8	Doodahur ...					9 10 0
9	Esapoor, Puttee Sheroo ...					34 6 0
10	Ditto, ditto Dhun Singh ...					2 14 0
11	Qasimpoor ...					67 6 0
12	Koortan ...					123 12 0
13	Kasolee ...					119 10 0
14	Gungairoo, Puttee Sadat ...					111 6 0
15	Ditto, ditto Hindooan ...					35 12 0
16	Ditto, ditto Mosulmanan ...					1 6 0
Total, Chuk Kyranah ...		...	...	...	...	974 14 0
1	Brim Khara, Puttee Lada ...	} 2 1 2	} 2 1 2	} 1 7 1	} 0 12 0	49 12 0
2	Ditto, ditto Ramdut ...					103 10 0
3	Pijokhara ...					223 14 0
4	Jusola ...					951 8 0
5	Chuk Doona Khara ...					76 11 0
6	Russoolpoor ...					167 15 0
7	Salah Kharea ...					16 9 0
8	Fuzulpoor Khalsea ...					132 11 0
9	Ditto Lakhraj ...					87 1 0
10	Khindraolee, Puttee Hindooan ...					626 0 0
11	Ditto, ditto Mosulmanan ...					308 14 0
12	Lahoreepoor ...					184 8 0
Total, Chuk Shamlee ...		...	...	...	...	2,929 1 0
GRAND TOTAL ...		...	...	...	...	14,230 13 0

KANDHLA.

of the Eastern Jumna Canal.—(Continued.)

7.				8.	9.	10.				
ON UNIRRIGATED AREA.				Difference of Revenue be- tween irri- gated and unir- rigated rates.	Number of wells closed by Canal.	TWENTY-TWO ACRES ALLOWED TO EACH WELL.				
Roslee.	Dakur.	Bhoor.	Total.			Meean.	Roslee.	Dakur.	Bhoor.	Total.
Rs. As. P.	Rs. As. P.		Rs. As. P.	Rs. As. P.						
896 14 0	4 0 0	...	964 15 0	328 9 0	6	9	122	1	...	132
581 11 0	34 0 0	...	638 12 0	216 10 0	...	...	...	...	...	...
666 4 0	54 0 0	...	776 10 0	275 6 0	4	6	74	8	...	88
1,317 2 0	134 0 0	...	1,879 5 0	768 3 0	...	...	...	...	...	...
796 15 0	382 0 0	...	1,904 2 0	921 4 0	6	48	52	32	...	132
479 3 0	32 0 0	...	863 4 0	399 2 0	5	44	61	5	...	110
899 7 0	42 0 0	...	1,518 0 0	685 14 0	5	41	65	4	...	110
707 4 0	52 0 0	...	1,009 10 0	410 6 0	1	5	15	2	...	22
525 5 0	302 0 0	...	2,288 9 0	621 5 0	18	133	151	112	...	396
458 11 0	40 0 0	...	824 2 0	379 12 0	...	...	...	...	...	...
184 8 0	58 0 0	...	378 5 0	176 15 0	...	...	...	...	...	...
602 3 0	100 0 0	...	781 10 0	293 4 0	...	...	...	...	...	...
471 8 0	6 0 0	...	574 14 0	216 10 0	...	...	...	...	...	...
1,478 9 0	12 0 0	...	2,648 13 0	1,237 9 0	7	67	86	1	...	154
497 2 0	112 0 0	...	670 10 0	254 2 0	1	2	16	4	...	22
2,080 12 0	340 0 0	...	3,084 7 0	1,266 13 0	...	...	...	...	...	...
4,194 13 0	708 0 0	...	6,604 5 0	2,804 9 0	19	104	258	56	...	418
673 15 0	96 0 0	...	977 8 0	398 6 0	...	...	...	...	...	...
356 3 0	46 0 0	...	589 4 0	259 2 0	...	...	...	...	...	...
361 5 0	84 0 0	...	583 11 0	247 11 0	...	...	...	...	...	...
474 1 0	14 0 0	...	936 8 0	452 10 0	6	63	66	3	...	132
310 1 0	26 0 0	...	464 3 0	195 11 0	1	6	14	2	...	22
304 15 0	52 0 0	...	528 10 0	235 12 0	3	21	37	8	...	66
376 11 0	304 0 0	...	798 9 0	349 1 0	1	3	9	10	...	22
937 14 0	28 0 0	...	1,150 6 0	432 14 0	10	35	178	7	...	220
1,199 4 0	250 0 0	...	2,702 5 0	1,330 7 0	...	...	...	...	...	...
276 12 0	10 0 0	...	637 13 0	323 15 0	1	12	10	...	...	22
22,109 4 0	8,342 0 0	...	35,778 2 0	15,481 14 0	94	599	1,214	255	...	2,068
177 6 0	15 8 0	...	226 15 0	125 0 0	2	6	34	4	...	44
330 0 0	74 12 0	...	436 6 0	205 14 0	...	...	...	...	...	...
139 4 0	...	...	170 8 0	107 8 0	...	...	...	...	...	...
210 6 0	80 13 0	...	343 7 0	177 6 0	...	...	...	...	...	...
66 0 0	43 7 0	...	123 3 0	57 0 0	...	...	...	...	...	...
232 14 0	2 0 0	...	459 14 0	338 10 0	...	...	...	...	...	...
594 0 0	31 5 0	...	755 15 0	432 2 0	...	...	...	...	...	...
160 14 0	...	...	170 8 0	84 8 0	...	...	...	...	...	...
333 12 0	18 2 0	...	281 4 0	150 2 0	1	5	36	3	...	44
123 12 0	...	...	126 8 0	59 8 0	2	1	43	...	...	44
251 10 0	40 7 0	...	359 7 0	204 0 0	...	...	...	...	...	...
790 10 0	40 7 0	...	954 13 0	515 10 0	...	...	...	...	...	...
932 10 0	71 12 0	...	1,114 0 0	578 8 0	...	...	...	...	...	...
2,594 8 0	117 8 0	...	2,753 1 0	1,308 2 0	5	5	99	6	...	110
251 10 0	23 4 0	...	310 10 0	162 6 0	...	...	...	...	...	...
143 0 0	...	...	144 6 0	66 10 0	...	...	...	...	...	...
7,302 4 0	558 11 0	...	8,730 13 0	4,562 14 0	10	17	212	13	...	242
130 10 0	...	...	180 6 0	94 14 0	...	...	...	...	...	...
271 9 0	...	...	375 8 0	197 8 0	1	6	12	...	...	22
563 13 0	281 5 0	...	1,069 0 0	512 11 0	5	25	62	45	...	132
592 14 0	291 7 0	...	1,835 15 0	1,062 14 0	8	96	60	42	...	198
271 9 0	76 7 0	...	424 11 0	303 15 0	...	...	...	...	...	...
472 10 0	17 5 0	...	657 14 0	340 8 0	7	39	109	6	...	154
170 0 0	56 4 0	...	242 13 0	107 7 0	...	...	...	...	...	...
756 10 0	139 15 0	...	1,029 4 0	483 9 0	...	...	...	...	...	...
462 4 0	46 3 0	...	595 8 0	286 6 0	...	...	...	...	...	...
914 3 0	54 13 0	...	1,595 0 0	886 14 0	15	128	186	16	...	380
862 6 0	278 7 0	...	1,449 11 0	707 8 0	8	35	96	45	...	176
105 12 0	98 2 0	...	388 6 0	216 4 0	...	...	...	...	...	...
5,574 4 0	1,340 4 0	...	9,843 9 0	5,100 6 0	44	329	529	154	...	1,012
34,885 12 0	5,335 15 0	...	54,352 8 0	25,145 2 0	148	945	1,955	422	...	3,322

PERGUNNAH

Statement showing Profits due to the operation

1. No.	2. Name of Mouzah.	11. REVENUE DERIVABLE FROM WELL			
		Meesun.	Roslee.	Dakur.	Bhoor.
		Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
1	Aldee, Puttee Nanuk Chund ...	38 4 0	411 12 0	3 0 0	—
2	Ditto, ditto Byjnath ...	...	...	...	...
3	Ditto, ditto Sadasookh ...	25 8 0	249 12 0	24 0 0	...
4	Alam, ditto Khoord ...	...	...	...	...
5	Ditto, ditto Kallan ...	204 0 0	175 8 0	96 0 0	...
6	Bunehra ...	187 0 0	205 14 0	15 0 0	...
7	Buharee ...	174 4 0	219 6 0	12 0 0	...
8	Khowsapoor ...	21 4 0	50 10 0	6 0 0	...
9	Dangrore ...	565 4 0	509 10 0	836 0 0	...
10	Rampoor Kharee, Puttee Bunseedhur	...	...	...	...
11	Ditto, ditto Gosanee...	...	...	...	...
12	Shahpoor ...	...	...	...	...
13	Soona ...	...	...	...	...
14	Tahurpoor Bhuhheesa...	284 12 0	290 4 0	3 0 0	...
15	Futtelepoor ...	8 8 0	54 0 0	12 0 0	...
16	Kandhla Mehal Muzbootia ...	...	...	...	...
17	Ditto ditto, 15 biswas ...	442 0 0	870 12 0	168 0 0	...
18	Ditto ditto, Mootfurkat ...	...	...	...	...
19	Ditto ditto, 5 biswas ...	...	...	...	...
20	Kawana ...	...	...	...	...
21	Kunyan ...	267 12 0	222 12 0	9 0 0	...
22	Goojurpoor ...	25 8 0	47 4 0	6 0 0	...
23	Mutnaolee ...	89 4 0	124 14 0	24 0 0	...
24	Mulukpoor...	12 12 0	30 6 0	30 0 0	...
25	Meemla ...	148 12 0	600 12 0	21 0 0	...
26	Nala ...	...	...	...	...
27	Harmuspoor ...	51 0 0	33 12 0	...	...
Total, Chuk Kandhla ...		2,545 12 0	4,097 4 0	765 0 0	...
1	Asudpoor ...	18 0 0	68 0 0	5 1 0	...
2	Ambehta ...	...	...	...	...
3	Busse ...	...	...	...	...
4	Bamnolee ...	...	...	...	...
5	Bhogurpoor ...	...	...	...	...
6	Churhoo ...	...	...	...	...
7	Doondoo Khara ...	...	...	...	...
8	Doodahur ...	...	...	...	...
9	Easpoor, Puttee Sheroo ...	15 0 0	79 0 0	3 13 0	...
10	Ditto, ditto Dhun Singh ...	8 0 0	86 0 0	...	...
11	Qasimpoor ...	...	...	...	...
12	Koortan ...	...	...	...	...
13	Kasolee ...	...	...	...	...
14	Gungalroo, Pundit Sadat ...	15 0 0	198 0 0	7 9 0	...
15	Ditto, ditto Hindooan ...	...	...	...	...
16	Ditto, ditto Mosulmanan ...	...	...	...	...
Total, Chuk Kyrana ...		51 0 0	424 0 0	16 7 0	...
1	Brim Khara, Puttee Lada ...	...	...	...	...
2	Ditto, ditto Ramdut ...	21 9 0	48 0 0	...	...
3	Pijokhara ...	89 14 0	186 0 0	87 2 0	...
4	Jusola ...	945 0 0	180 0 0	81 5 0	...
5	Chuk Doona Khara ...	...	...	...	...
6	Russoolpoor ...	140 3 0	327 0 0	11 10 0	...
7	Salah Kharee ...	...	...	...	...
8	Fuzulpoor Khalea ...	...	...	...	...
9	Ditto Lakhraj ...	...	...	...	...
10	Khindraolee, Puttee Hindooan ...	460 0 0	558 0 0	31 0 0	...
11	Ditto, ditto Mosulmanan ...	125 13 0	283 0 0	87 2 0	...
12	Lahorespoor ...	...	...	...	...
Total, Chuk Shamlee ...		1,182 7 0	1,587 0 0	298 3 0	...
GRAND TOTAL ...		3,779 3 0	6,108 4 0	1,079 10 0	...

KANDHLA.

of the Eastern Jumna Canal.—(Continued.)

12.					
IRRIGATION.	REVENUE ON WELL IRRIGATED AREA BY DRY RATES.				
Total.	Meesun.	Roslee.	Dakur.	Bhoor.	Total.
Ra. As. P.	Ra. As. P.	Ra. As. P.	Ra. As. P.	Ra. As. P.	Ra. As. P.
453 0 0	23 1 0	312 10 0	2 0 0	...	337 11 0
...
299 4 0	15 6 0	189 10 0	16 0 0	...	221 0 0
...
475 8 0	123 0 0	133 4 0	64 0 0	...	320 4 0
407 14 0	112 12 0	156 5 0	10 0 0	...	279 1 0
405 10 0	105 1 0	166 9 0	8 0 0	...	279 10 0
77 14 0	12 13 0	38 7 0	4 0 0	...	55 4 0
1,410 14 0	340 13 0	386 15 0	224 0 0	...	951 12 0
...
...
...
...
578 0 0	171 11 0	220 6 0	2 0 0	...	394 1 0
74 8 0	5 2 0	41 0 0	8 0 0	...	54 2 0
...
1,480 12 0	266 8 0	661 2 0	112 0 0	...	1,039 10 0
...
...
...
499 8 0	161 7 0	169 2 0	6 0 0	...	336 9 0
78 12 0	15 6 0	35 14 0	4 0 0	...	55 4 0
288 2 0	53 13 0	94 13 0	16 0 0	...	164 10 0
73 2 0	7 11 0	23 1 0	20 0 0	...	50 12 0
770 8 0	89 11 0	456 2 0	14 0 0	...	559 13 0
...
84 12 0	30 12 0	25 10 0	...	...	56 6 0
...
7,408 0 0	1,534 15 0	3,110 14 0	510 0 0	...	5,155 13 0
...
91 1 0	8 4 0	46 12 0	4 1 0	...	59 1 0
...
...
...
...
...
90 13 0	6 14 0	49 8 0	3 1 0	...	59 7 0
89 0 0	1 6 0	59 2 0	...	...	60 8 0
...
...
...
220 9 0	6 14 0	136 2 0	6 1 0	...	149 1 0
...
...
491 7 0	23 6 0	201 8 0	13 3 0	...	328 1 0
...
69 9 0	12 7 0	33 3 0	...	...	45 10 0
363 0 0	51 13 0	128 8 0	64 15 0	...	245 0 0
606 5 0	199 0 0	124 0 0	60 10 0	...	384 0 0
...
478 13 0	80 14 0	225 15 0	8 11 0	...	315 8 0
...
...
...
1,049 0 0	265 5 0	385 9 0	23 1 0	...	673 15 0
500 15 0	72 9 0	199 0 0	64 0 0	...	336 8 0
...
3,067 10 0	682 0 0	1,096 9 0	222 4 0	...	2,000 13 0
...
10,987 1 0	2,240 5 0	4,498 15 0	745 7 0	...	7,484 11 0

PERGUNNAH

Statement showing Profits due to the operation

1.	2.	13.	14.
No.	Mousah.	Difference of Revenue on area irrigated by wells.	Actual profits due to Canal.
1	Aldee, Puttee Nanuk Chund	...	...
2	Ditto, ditto Byjnauth	...	...
3	Ditto, ditto Sudasookh	...	...
4	Alum, ditto Khoord	...	...
5	Ditto, ditto Kullian	...	...
6	Bunehra	...	...
7	Buharee	...	...
8	Khowsapoor	...	...
9	Dangroor	...	...
10	Rampoor Kharee, Puttee Bunseedhur	...	...
11	Ditto ditto, ditto Gosanee	...	...
12	Shahpoor	...	...
13	Soona	...	...
14	Tahrpoor Bhuhheesa	...	...
15	Futtehpoor	...	...
16	Kandhia Mehal Musbootia	...	...
17	Ditto, ditto 15 biswas	...	...
18	Ditto, ditto Mootfurkat	...	...
19	Ditto, ditto 5 biswas	...	...
20	Kewana	...	...
21	Kunyan	...	...
22	Goojarpoor	...	...
23	Mutnaolee	...	...
24	Mulukpoor	...	...
25	Meemla	...	...
26	Nala	...	...
27	Hurmuspoor	...	...
Total, Chuk Kandhia ...			
1	Asudpoor	...	...
2	Ambehta	...	...
3	Bunsee	...	...
4	Bannolee	...	...
5	Bhogarpoor	...	...
6	Churhoo	...	...
7	Doondoo Khara	...	...
8	Doodahur	...	...
9	Keapoor, Puttee Sheroo	...	...
10	Ditto, ditto Dhun Singh	...	...
11	Qadimpoor	...	...
12	Koortan	...	...
13	Kasolee	...	...
14	Gungalroo, Puttee Sadat	...	...
15	Ditto, ditto Hindocan	...	...
16	Ditto, ditto Mosulmanan	...	...
Total, Chuk Kyranah ...			
1	Brim Khara, Puttee Lada	...	...
2	Ditto, ditto Ramdut	...	...
3	Pejokhira	...	...
4	Jusola	...	...
5	Chuk Doona Khara	...	...
6	Rusoolpoor	...	...
7	Salah Kharee	...	...
8	Fuzulpoor Khalsa	...	...
9	Ditto Lakhraj	...	...
10	Khindraolee, Puttee Hondocan	...	...
11	Ditto, ditto Mosulmanan	...	...
12	Lahoreepoor	...	...
Total, Chuk Shamlee ...			
GRAND TOTAL ...			

KANDHLA.

of the Eastern Jumna Canal.—(Concluded.)

15.

Remarks.

Water is near the surface in this pergunnah, averaging 5 to 6 feet from surface. In very many places kutchas wells can be made at a moderate cost (Rs. 30) ; hence it comes to pass that out of a total pergunnah jumma of Rs. 1,11,410, the Canal has been credited with only Rs. 9,456 ; were the Canal to stop, no doubt the zemindars would take largely to well irrigation. The number of wells that might be constructed under a pressure of this kind is of course conjectural, but it has been thought the safest to assimilate as nearly as possible to the average given by the most advanced estate in each circle. I cannot pretend to precise accuracy in this account so liable to fluctuations of all kinds—the circumstances of each estate have however been carefully considered before applying averages. It has been a work of great labour, as I have had virtually to go over all the assessments *de novo*. The number of actual wells, masonry and kutchas, were a second time tested before these proposals were completed, and wherever errors were found to exist they were corrected.

Rs. 9,456 allowed in Column 14, Canal profits.

S. N. MARTIN,
Collector.

Abstract of Statement A.

B.

No.	Pergunnah.	Name of Mouzah.	Area irrigated by Canal.	Difference of Revenue between irrigated and unirrigated rates.	Difference of Revenue on area irrigated by wells.	Actual profits due to Canal.	Remarks.
				Rs.	Rs.	Rs.	
1	KANDHLA.	Aldee, Puttee Nanukchund ...	377	329	115	214	The assessment being already below half assets, no deduction necessary on account of Canal profits.
2		Ditto, Puttee Byjnath ...	253	217	...	217	Ditto ditto.
3		Ditto, Puttee Sudasook...	309	275	78	197	Ditto ditto.
4		Alum, Puttee Khoord ...	747	768	...	768	Rs. 302 Canal profits.
5		Ditto, Puttee Kullian ...	785	921	155	766	Rs. 368 ditto.
6		Bunehra ...	340	399	129	270	Rs. 100 ditto.
7		Buharsee ...	597	686	126	560	Rs. 400 ditto.
8		Khowaspoor ...	403	410	23	387	Rs. 300 ditto.
9		Dangrore ...	536	621	459	162	No deduction; assessment independent of Canal.
10		Rampoor Kharee, Puttee Bunseedhur ...	326	380	...	380	Rs. 150 Canal profits.
11		Rampoor, Puttee Gosanee,	154	177	...	177	Rs. 100 ditto.
12		Shahpoor ...	316	293	...	293	Rs. 150 ditto.
13		Soona ...	225	217	...	217	Rs. 130 ditto.
14		Tahurpoor Bhubheesa ...	1,035	1,238	184	1,054	Rs. 500 ditto.
15		Futtehpoor ...	274	254	20	234	Rs. 130 ditto.
16		Kandhla Mehal Muzbootta	1,241	1,267	...	1,267	Nothing allowed; assessment independent of Canal.
17		Ditto ditto, 15 biswas,	2,655	2,804	441	2,363	Rs. 1,000 allowed as Canal profits.
18		Ditto ditto, Mootfurkat,	392	398	...	398	Rs. 200 ditto.
19		Ditto ditto, 5 biswas ...	235	259	...	259	Rs. 100 ditto.
20		Kewana ...	237	248	...	248	Rs. 191 ditto.
21		Kunyan ...	367	453	163	290	Rs. 100 ditto.
22		Goojurpoor...	184	196	24	172	No deduction; necessary.
23		Mutnaolee ...	212	236	74	162	Rs. 100 Canal profits.
24		Mulukpoor ...	345	349	22	327	Rs. 100 allowed ditto.
25		Meemla ...	452	433	211	222	Rs. 200 ditto.
26		Nala ...	1,082	1,330	...	1,330	Rs. 472 ditto.
27		Hurmuzpoor ...	250	324	28	296	Rs. 117 ditto.
		Total, Chuk Kandhla...	14,329	15,482	2,252	13,230	
1		Asudpoor ...	169	125	32	93	Rs. 93 Canal profits.
2		Ambehta ...	337	206	...	206	Rs. 100 ditto.
3		Bussee ...	124	108	...	108	Rs. 105 ditto.
4		Bamnaolee ...	271	177	...	177	Rs. 150 ditto.
5		Bhoogurpoor ...	101	57	...	57	Rs. 45 ditto.
6		Churhao ...	335	329	...	329	Rs. 200 ditto.
7		Doondoo Khara ...	558	432	...	432	Rs. 300 ditto.

Abstract of Statement A.—(Concluded.)

B.

No.	Pergunnah.	Name of Mourah.	Area irrigated by Canal	Difference of Revenue between irrigated and unirrigated rates.	Difference of Revenue on area irrigated by wells.	Actual profits due to Canal.	Remarks.
				Rs.	Rs.	Rs.	
8	KANDHIA.—(Concluded.)	Doodahur ...	124	84	...	84	Ra. 50 Canal profits.
9		Esapoor, Puttee Shero...	208	150	31	119	Ra. 77 ditto.
10		Ditto, Puttee Dhunsing	92	60	29	31	No deduction called for.
11		Qasimpoor ...	272	204	...	204	Ra. 100 Canal profits.
12		Koortan ...	705	516	...	516	Ra. 200 ditto.
13		Kasolee ...	829	578	...	578	Ra. 150 ditto.
14		Gungairoo, Puttee Sadat,	2,033	1,308	71	1,237	Ra. 500 ditto.
15		Ditto, Puttee Hindooan,	232	162	...	162	Ra. 97 ditto.
16		Ditto, Puttee Mosulmanan ...	105	67	...	67	Assessment below half assets; no deduction necessary.
		Total, Chuk Kyranah ...	6,495	4,563	163	4,400	
1		Birm Khara, Puttee Lada ...	87	95	...	95	Ra. 73 Canal profits.
2		Ditto, Puttee Ramdut...	181	198	24	174	Ra. 152 ditto.
3		Pijokhera ...	575	513	118	395	Ra. 238 ditto.
4		Jusala ...	947	1,063	222	841	Ra. 500 ditto.
5		Chuk Doonakhera ...	221	204	...	204	Ra. 100 ditto.
6		Rusoolpoor ...	321	340	163	177	Ra. 151 ditto.
7		Salah Khera ...	129	107	...	107	Ra. 50 ditto.
8		Fuzulpoor Khalsa ...	526	484	...	484	Ra. 200 ditto.
9		Ditto Lakhraj ...	297	286	...	286	Ra. 94 ditto.
10		Khindraolee, Puttee Hindooan ...	781	887	375	512	Ra. 322 ditto.
11		Ditto, Puttee Mosulmanan ...	758	707	165	542	Ra. 200 ditto.
12		Lahoreepoor ...	208	216	...	216	Ra. 99 ditto.
		Total, Chuk Shamlee ...	5,031	5,100	1,067	4,033	
		GRAND TOTAL ...	22,855	25,145	3,482	21,663	Ra. 9,456 allowed as Canal profits.

S. N. MARTIN,
Collector.

PERGUNNAH
Statement showing Profits due

1.	2.	3.		
No.	Name of Mouzah.	AREA IRRIGATED		
		Meesun.	Roslee.	Dakur.
1	Tundehra	701	236	...
2	Kasimpoor Bhooma	22	42	...
3	Kheree Serai	66	288	6
	Total, Chuk Bhookurharee ...	195	566	6
1	Buhadurpoor	153	25	...
2	Tiroula	90	121	9
3	Rajpoor Kullian	82	89	...
4	Sohnjnee	225	182	16
5	Koorace	94	389	...
6	Kethora	88	3	...
7	Ghutaen Shemalee	339	252	...
8	Ghutaen Junoobee	405	59	1
9	Noonee Khara	84	269	1
	Total, Chuk Tiasa ...	1,560	1,389	27
1	Bhooma, 12 biswahs	420	44	...
2	Ditto, 8 ditto	157	93	3
3	Tipurpoor	21	63	...
4	Surburahpoor, alias Tourharee	42	365	1
5	Chooreala	63	131	...
6	Hyderpoor	10	81	...
7	Digdhera	21	130	...
8	Rajpoor Khoord	120	88	1
9	Sumbhulhera	23	12	...
10	Kuteah	33	114	...
11	Kootubpoor	221	294	...
12	Mujhera	86	166	...
13	Nizampoor Khola ... ..	...	119	...
14	Nugla Kheper	58	78	2
15	Hashimpoor, 7 biswahs	94	122	1
16	Ditto, Mohsun Ali, 3 biswahs	46	6	...
17	Ditto, Bindrabun, 2 biswahs	20	9	5
18	Ditto, Shoojaut Ali, 1 biswah	21	30	...
19	Ditto, Kurum Ali, 3 biswahs	50	31	1
20	Ditto Chooneelall	25	15	3
	Total, Chuk Joulee ...	1,531	1,991	17
	GRAND TOTAL ...	3,286	3,946	50

BHOOMA SUMBULHERA.

to the operation of the Ganges Canal.

		4.			
BY CANAL.		REVENUE RATE PER IRRIGATED ACRE.			
Bhoor.	Total.	Meesun.	Roslee.	Dakur.	Bhoor.
		Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
16	359	} 2 2 2	1 8 5½	0 0 0	0 13 0½
19	83				
3	368				
38	805
...	178	} 2 4 0	2 0 0½	1 6 2½	1 0 11
6	226				
...	171				
1	424				
16	499				
...	91				
27	618				
10	475				
66	420	} 1 12 1	1 5 10½	1 0 2	1 3 8
126	3,102				
31	495				
4	257				
...	84				
...	408				
16	210				
...	91				
9	160				
45	254				
6	41				
4	151				
46	561				
21	273				
...	119				
...	138				
3	220				
...	52				
...	34				
...	51				
...	82				
...	43				
185	3,724
349	7,631

PERGUNNAH

Statement showing Profits due to the

1.	2.	5.				
Number.	Name of Mouzah.	REVENUE ON IRRIGATED AREA.				
		Meesun.	Roslee.	Dakur.	Bho or.	Total.
		Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
1	Tundehra ...	228 7 0	360 12 0	...	13 1 0	602 4 0
2	Kasimpoor Bhooma ...	47 0 0	64 3 0	...	15 8 0	126 11 0
3	Kherree Serai ...	140 15 0	440 4 0	9 3 0	2 7 0	592 13 0
	Total, Chuk Bhookurharee ...	416 6 0	865 3 0	9 3 0	31 0 0	1,321 12 0
1	Buhadurpoor ...	344 4 0	50 1 0	...	...	394 5 0
2	Tiroula ...	202 8 0	242 5 0	12 8 0	6 5 0	463 10 0
3	Rajpoor Kullan ...	184 8 0	178 4 0	...	...	362 12 0
4	Sohnjee ...	506 4 0	364 8 0	22 3 0	1 1 0	894 0 0
5	Koorace ...	211 8 0	779 0 0	...	16 15 0	1,007 7 0
6	Kethora ...	198 0 0	6 0 0	...	...	204 0 0
7	Ghutaen Shemalee ...	762 12 0	504 11 0	...	28 9 0	1,296 0 0
8	Ghutaen Junoobee ...	911 4 0	118 2 0	1 6 0	10 9 0	1,041 5 0
9	Noonee Khara ...	189 0 0	538 11 0	1 6 0	69 13 0	798 14 0
	Total, Chuck Tissa ...	3,510 0 0	2,781 10 0	37 7 0	133 4 0	6,462 5 0
1	Bhooma, 12 biswahs ...	738 4 0	60 3 0	...	38 2 0	836 9 0
2	Ditto, 8 ditto ...	275 15 0	127 3 0	8 1 0	4 15 0	411 2 0
3	Tipurpoor ...	36 15 0	86 2 0	...	...	123 1 0
4	Surburahpoor, alias Tourharee...	73 13 0	499 0 0	1 0 0	...	573 13 0
5	Chooreala ...	110 12 0	179 2 0	...	19 11 0	309 9 0
6	Hyderpoor ...	17 9 0	110 12 0	...	...	128 5 0
7	Digdhera ...	36 15 0	177 12 0	...	11 1 0	225 12 0
8	Rajpoor Khoord ...	210 15 0	120 5 0	1 0 0	55 5 0	387 9 0
9	Sumbhulhera ...	40 7 0	16 6 0	...	7 6 0	64 3 0
10	Kuteah ...	58 0 0	155 14 0	...	4 15 0	218 13 0
11	Kootubpoor ...	338 8 0	401 15 0	...	56 9 0	847 0 0
12	Mujhera ...	151 3 0	226 15 0	...	25 13 0	403 15 0
13	Nizampoor Khola ...	...	162 11 0	...	...	162 11 0
14	Nugla Kheper ...	101 15 0	106 10 0	2 0 0	...	210 9 0
15	Hashimpoor, 7 biswahs ...	165 4 0	166 13 0	1 0 0	3 11 0	336 12 0
16	Ditto, Mohsun Ali, 3 biswahs ...	80 14 0	8 3 0	...	...	89 1 0
17	Ditto, Bindrabun, 2 biswahs ...	35 2 0	12 5 0	5 1 0	...	52 8 0
18	Ditto, Shoojaut Ali, 1 biswah... ..	36 15 0	41 0 0	...	...	77 15 0
19	Ditto, Kurum Ali, 3 biswahs ...	87 14 0	42 6 0	1 0 0	...	131 4 0
20	Ditto Chooneelall ...	43 15 0	20 8 0	3 1 0	...	67 8 0
	Total, Chuck Joulee ...	2,691 3 0	2,722 1 0	17 3 0	227 8 0	5,657 15 0
	GRAND TOTAL ...	6,617 9 0	6,368 12 0	63 13 0	391 12 0	13,442 0 0

BHOOMA SUMBULHERA.

operation of the Ganges Canal.—(Continued.)

6.				7.				
REVENUE RATE PER UNIRRIGATED ACRE.				REVENUE ON UNIRRIGATED AREA.				
Meesun.	Roslee.	Dakur.	Bhoor.	Meesun.	Roslee.	Dakur.	Bhoor.	Total.
Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
1 1 5½	1 1 5½	1 0 10	0 9 4	116 12 0	257 8 0	...	9 5 0	383 9 0
				24 0 0	45 13 0	...	30 1 0	99 14 0
				72 0 0	304 4 0	6 3 0	1 12 0	384 3 0
				212 12 0	607 9 0	6 3 0	41 2 0	867 10 0
1 6 11	1 6 11	0 15 10½	0 12 1	219 2 0	35 13 0	...	...	254 15 0
				128 15 0	173 5 0	8 15 0	4 9 0	315 12 0
				117 7 0	127 7 0	...	...	244 14 0
				322 4 0	260 11 0	15 13 0	0 12 0	599 8 0
				134 10 0	557 3 0	...	12 1 0	703 14 0
				126 1 0	4 4 0	...	...	130 5 0
				485 9 0	360 15 0	...	20 6 0	866 14 0
				580 1 0	84 8 0	1 0 0	7 8 0	673 1 0
				120 5 0	385 5 0	1 0 0	49 13 0	556 7 0
				2,234 6 0	1,989 7 0	26 12 0	95 1 0	4,345 10 0
0 15 10½	0 15 10½	0 11 6½	0 8 5	416 12 0	43 10 0	...	16 5 0	476 11 0
				155 12 0	92 4 0	2 2 0	2 1 0	252 3 0
				20 13 0	62 8 0	...	...	83 5 0
				41 11 0	362 2 0	0 12 0	...	404 9 0
				62 8 0	130 0 0	...	8 7 0	200 15 0
				9 15 0	80 6 0	...	...	90 5 0
				20 13 0	129 0 0	...	4 12 0	154 9 0
				119 1 0	87 5 0	0 11 0	23 11 0	230 12 0
				22 13 0	11 15 0	...	3 2 0	37 14 0
				32 12 0	113 2 0	...	2 2 0	148 0 0
				219 4 0	291 11 0	...	24 3 0	535 2 0
				85 5 0	164 11 0	...	11 1 0	261 1 0
				...	118 1 0	...	...	118 1 0
				57 9 0	77 7 0	1 7 0	...	136 7 0
				93 5 0	121 1 0	0 12 0	1 9 0	216 11 0
				45 10 0	5 15 0	...	...	51 9 0
				19 14 0	8 15 0	3 10 0	...	32 7 0
				20 13 0	29 12 0	...	...	50 9 0
				49 10 0	30 12 0	0 11 0	...	81 1 0
				24 13 0	14 14 0	2 3 0	...	41 14 0
...	...	...	...	1,519 1 0	1,975 7 0	12 4 0	97 5 0	3,604 1 0
...	...	...	...	3,966 3 0	4,572 7 0	45 3 0	233 8 0	8,817 5 0

PERGUNNAH

Statement showing Profits due to the

[illegible]

BHOOMA SUMBULHERA.

operation of the Ganges Canal.—(Concluded.)

DERIVABLE FROM IRRIGATION.			12. REVENUE ON WELL IRRIGATED AREA BY DRY RATES.					13. Difference of Revenue on area irrigated by wells.	14. Actual profits due to Canal.	15. Remarks.
Dakur.	Bhoor.	Total.	Meeun.	Roslee.	Dakur.	Bhoor.	Total.		Rs. As. P.	
...	218 11 0	
...	26 13 0	
...	208 10 0	
...	454 2 0	
...	139 6 0	
...	147 14 0	
...	117 14 0	
...	294 8 0	
...	303 9 0	
...	73 11 0	
...	429 2 0	
...	368 4 0	
...	242 7 0	
...	2,116 11 0	
...	359 14 0	
...	158 15 0	
...	39 12 0	
...	169 4 0	
...	108 10 0	
...	38 0 0	
...	71 3 0	
...	156 13 0	
...	26 5 0	
...	70 13 0	
...	311 14 0	
...	142 14 0	
...	44 10 0	
...	74 2 0	
...	120 1 0	
...	37 8 0	
...	20 1 0	
...	27 6 0	
...	50 3 0	
...	25 10 0	
...	2,053 14 0	
...	4,624 11 0	Rs. 3,553 allowed for Canal profits.

S. N. MARTIN,
Collector.

Abstract of Statement A.

B.

Number.	Name of Mouzah.	Area irrigated by Canal.	Difference of Revenue between irrigated and unirrigated rates.	Difference of Revenue on area irrigated by wells.	Actual profits due to Canal.	Remarks.
1	Tundehra					Rs. 200 allowed as Canal profits ; no wells on the property.
2	Kashimpoor Bhooma ...					No deduction necessary ; irrigation trifling.
3	Kheres Serai					Rs. 200 Canal profits.
	Total, Chuk Bhookurharee					
1	Buhadurpoor					Rs. 50 Canal profits.
2	Tiroula					Rs. 175 ditto.
3	Rajpoor Kallan					Rs. 120 ditto.
4	Sohnjee					Rs. 200 ditto.
5	Koorace					Rs. 250 ditto.
6	Kethora					Rs. 50 ditto.
7	Guhtaan Shemalee ...					Rs. 400 ditto.
8	Ghutaen Junabee ...					Rs. 250 ditto.
9	Noonee Khara					Rs. 150 ditto.
	Total, Chuk Tissa	3,102	2,117	...	2,117	
1	Bhooma, 12 Biswas ...	495	360	...	360	Rs. 300 ditto.
2	Ditto, 9 ditto	257	159	...	159	Rs. 150 ditto.
3	Tipurpoor	24	20	...	20	No deduction necessary.
4	Surburahpoor, alias Tourharee	408	169	...	169	Rs. 100 Canal profits.
5	Chooreala	210	109	...	109	Rs. 100 ditto.
6	Hyderpoor... ..	21	28	...	28	No deduction necessary ; assessment independent of Canal.
7	Digdhera	160	71	...	71	Rs. 65 Canal profits.
8	Rajpoor Khoord	254	157	...	157	Rs. 50 ditto.
9	Sumbulhera	41	26	...	26	No deduction necessary ; Canal irrigation a mere trifle.
10	Kuteah	151	71	...	71	No deduction necessary.
11	Kootubpoor	561	312	...	312	Rs. 250 Canal profits.
12	Mujhera	273	143	...	143	Rs. 100 ditto.
13	Nuzampoor Khola	119	45	...	45	Rs. 40 ditto.
14	Nugla Kheper	188	74	...	74	Rs. 70 ditto.
15	Hashimpoor, 7 biswas ...	220	120	...	120	Rs. 100 ditto.

Abstract of Statement A.—(Concluded.)

B.

Number.	Pergunnah.	Name of Nousah.	Area irrigated by Canal.	Difference of Revenue between irrigated and unirrigated rates.	Difference of Revenue on area irrigated by wells.	Actual profits due to Canal.	Remarks.
16	BHOOMA SUMEULSERA.—(Concluded.)	Hashimpoor, Mohsun Ali, 3 biswas ...					Ra. 38 Canal profits.
17		Ditto, Bindrabun, 2 biswas ...					Ra. 25 ditto.
18		Ditto, Shoojat Ali, 1 biswa ...					No deduction necessary.
19		Ditto, Kurum Ali, 3 Biswas ...					No deduction necessary
20		Ditto, Choonee Lall ...					Ra. 20 Canal profits.
		Total, Chuk Joulee ...					
		GRAND TOTAL ...	7,631	4,625	...	4,625	Ra. 3,553 allowed for Canal profits.

This pergunnah is particularly high and dry—no kutchas wells; nor can they possibly be made in such a sandy tract; average depth of water is 30 feet. In the above estimate no allowance has been made for cultivated land that would probably be waste were the Canal to be stopped. I find it impossible to calculate the amount of such land; for all practical purposes the above is as correct an estimate as can be made.

S. N. MARTIN,
Collector.

PERGUNNAH

Statement showing Profits due to the

1.	2.	3.					
Number.	Name of Mouzah.	AREA IRRIGATED BY CANAL.					Meesun.
		Meesun.	Roslee.	Dakur.	Bhoor.	Total.	
							Rs As P.
1	Untwara	245	321	1	...	567	2 0 9
2	Untee	28	47	...	...	75
3	Bazeedpoor Kowalee	205	225	...	3	433	
4	Bisanch	81	479	7	...	567	
5	Bitora	85	200	20	...	305	
6	Pal	166	206	9	...	381	
7	Pulree	106	225	6	...	337	
8	Talra	56	227	5	5	293	
9	Tisung	119	247	...	...	366
10	Jansuth	352	151	...	...	503
11	Jitwara	36	102	...	...	138
12	Jundharee	19	...	...	...	19
13	Chittora	43	98	...	...	141
14	Choganwa	211	677	4	...	892	
15	Ratour	102	159	7	...	268	
16	Sadpoor	39	110	1	...	150	
17	Salarpoor	14	31	...	1	46	
18	Sikhara	147	460	1	18	626	
19	Kowal	67	177	...	...	244
20	Kawalee	253	164	...	...	417
21	Khurtoulee	19	52	...	...	71
22	Khalwara	74	178	2	4	258	
23	Kola Potha	16	104	...	...	120
24	Muhdour	110	249	3	...	362	
25	Muhelkee	173	536	2	15	726	
26	Nugla Churhao	551	362	25	13	951	
27	Nugla Kubeerpoor	120	138	...	...	258
28	Nugla Muhasing	155	139	13	...	307	
	Total, Chuk Jansuth	3,592	6,064	106	59	9,821	...
1	Ahurwa	68	24	92	1 12 1½
2	Bhundour	42	35	...	...	77
3	Bulharee	213	70	...	...	283
4	Bhulwa	101	182	1	9	293	
5	Behra Asa	125	129	...	...	254
6	Toolseepoor	24	59	...	11	94	
7	Jerahra	34	50	...	4	88	
8	Joulee	145	679	7	9	840	
9	Chindoura	5	24	...	...	29
10	Chindouree	88	62	...	3	153	
11	Duhakharee	36	73	...	...	109
12	Duhasree	118	204	...	1	323	
13	Russoolpoor Kelour	...	62	...	...	62
14	Roorkulee Talib Ali	46	193	3	...	242	
15	Roorkulee Futteh Ali	52	257	10	...	319	
16	Kathka	34	259	...	...	293
17	Kumhara	20	100	6	...	126	
18	Khojulhara	64	209	2	1	276	
19	Khooknee	53	59	...	...	112
20	Kharee Ferozabad	48	262	...	...	310
21	Mutka	38	35	1	...	74	
22	Muvee Sadat	93	136	6	9	244	
23	Nugla Boozoorg	101	583	5	43	732	
24	Nugla Mobarick	162	272	...	...	389
	Total, Chuk Joulee	1,710	3,973	41	90	5,814	...
	GRAND TOTAL	5,302	10,037	147	149	15,635	...
25	Pumbora, Chuk Joulee	116	130	246	1 12 1½
	Total	5,418	10,167	147	149	15,881	...

JOGLEE.

operation of the Ganges Canal.

4.			5.				
REVENUE RATE PER IRRIGATED ACRE.			REVENUE ON IRRIGATED AREA.				
Roslee.	Dakur.	Bhoor.	Meesun.	Roslee.	Dakur.	Bhoor.	Total.
Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
			501 8 0	460 8 0	1 5 0	...	963 5 0
			57 5 0	67 7 0	...	...	124 12 0
			419 10 0	322 13 0	...	3 15 0	746 6 0
			165 13 0	687 3 0	9 5 0	...	862 5 0
			174 0 0	286 15 0	26 9 0	...	487 8 0
			339 12 0	295 8 0	11 15 0	...	647 3 0
			216 15 0	322 13 0	7 15 0	...	547 11 0
			114 10 0	325 11 0	6 10 0	6 8 0	453 7 0
			243 9 0	354 5 0	...	...	597 11 0
			720 8 0	216 10 0	...	...	937 2 0
			73 11 0	146 5 0	...	...	220 0 0
			38 14 0	...	...	...	38 14 0
			88 0 0	140 9 0	...	...	228 9 0
			431 14 0	971 3 0	5 5 0	...	1,408 6 0
1 6 11½	1 5 2½	0 4 10½	208 13 0	228 1 0	9 0 0	...	446 3 0
			79 13 0	157 13 0	1 5 0	...	238 15 0
			28 10 0	44 8 0	...	1 5 0	74 7 0
			300 14 0	659 14 0	1 5 0	23 8 0	985 9 0
			137 2 0	253 15 0	...	...	391 1 0
			517 14 0	235 2 0	...	...	753 0 0
			38 14 0	74 9 0	...	...	113 7 0
			151 8 0	255 5 0	2 10 0	5 4 0	414 11 0
			32 12 0	149 3 0	...	...	181 15 0
			225 2 0	357 3 0	4 0 0	...	586 5 0
			354 2 0	768 15 0	2 10 0	19 9 0	1,145 4 0
			1,127 13 0	519 5 0	33 3 0	17 0 0	1,697 5 0
			245 10 0	198 0 0	...	...	443 10 0
			217 4 0	199 6 0	17 4 0	...	433 14 0
...	...	...	7,252 4 0	8,699 1 0	140 10 0	77 1 0	16,169 0 0
			119 9 0	32 13 0	...	...	152 6 0
			73 3 0	47 14 0	...	...	121 11 0
			374 6 0	95 11 0	...	...	470 1 0
			177 9 0	248 13 0	1 0 0	11 1 0	438 7 0
			219 11 0	176 6 0	...	...	396 1 0
			42 3 0	80 11 0	...	13 9 0	136 7 0
			59 12 0	68 6 0	...	4 15 0	133 1 0
			254 14 0	928 5 0	7 1 0	11 1 0	1,201 5 0
			8 13 0	32 13 0	...	...	41 10 0
			154 11 0	84 12 0	...	3 11 0	243 2 0
			63 4 0	99 13 0	...	...	163 1 0
1 5 10½	1 0 2½	1 3 8½	207 7 0	278 15 0	...	1 4 0	487 10 0
			...	84 12 0	...	...	84 12 0
			80 14 0	263 14 0	3 0 0	...	347 12 0
			91 6 0	351 6 0	10 2 0	...	452 14 0
			59 12 0	354 2 0	...	...	413 14 0
			35 3 0	136 12 0	6 1 0	...	178 0 0
			112 8 0	285 12 0	2 0 0	1 4 0	401 8 0
			93 3 0	80 13 0	...	...	173 13 0
			84 6 0	358 3 0	...	...	442 9 0
			66 13 0	47 14 0	1 0 0	...	115 11 0
			163 8 0	185 15 0	6 1 0	11 1 0	366 9 0
			177 9 0	796 9 0	5 1 0	52 15 0	132 2 0
			284 8 0	310 6 0	...	...	594 14 0
...	...	...	3,005 10 0	5,431 7 0	41 6 0	110 13 0	8,289 4 0
...	...	...	10,257 14 0	14,130 8 0	182 0 0	187 14 0	24,758 4 0
1 5 10½	1 0 2½	1 3 8½	203 15 0	117 12 0	...	...	381 11 0
...	...	...	10,461 13 0	14,308 4 0	182 0 0	187 14 0	25,139 15 0

PERGUNNAH

Statement showing Profits due to the operation

1.	2.	6.			
Number.	Name of Mouzah.	REVENUE RATE PER UNIRRIGATED ACRE.			
		Meesun.	Roslee.	Dakur.	Bhoor.
		Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
1	Untwara ...	0 15 10	0 15 10	0 14 5½	0 11 1½
2	Untee ...				
3	Bazcedpoor Kowalee ...				
4	Bisanch ...				
5	Bitora ...				
6	Pal ...				
7	Pulree ...				
8	Talra ...				
9	Tisung ...				
10	Jansuth ...				
11	Jitwara ...				
12	Jundharee ...				
13	Chittora ...				
14	Choganwa ...				
15	Ratour ...				
16	Sadpoor ...				
17	Salarpoor ...				
18	Sikhara ...				
19	Kowal ...				
20	Kawalee ...				
21	Khurtoulee ...				
22	Khalwara ...				
23	Kola Potha ...				
24	Muhdour ...				
25	Mahelkee ...				
26	Nugla Churhao ...				
27	Nugla Kubeerpoor ...				
28	Nugla Muhasing ...				
	Total, Chuk Jansuth
1	Ahurwa ...	0 15 10½	0 15 10½	0 11 6½	0 8 5½
2	Bhundour ...				
3	Bulharee ...				
4	Bhulwa ...				
5	Behra Asa ...				
6	Toolseepoor ...				
7	Jerahra ...				
8	Joulee ...				
9	Chindoura ...				
10	Chindouree ...				
11	Duhakharee ...				
12	Duhasree ...				
13	Russoolpoor Kelour ...				
14	Roorkulee Talib Ali ...				
15	Roorkulee Futteh Ali ...				
16	Kathka ...				
17	Kumhara ...				
18	Khojulhara ...				
19	Khooknee ...				
20	Kharee Ferozabad ...				
21	Mutka ...				
22	Muvee Sadat ...				
23	Nugla Boozoorg ...				
24	Nugla Mobarick ...				
	Total, Chuk Joulee
	GRAND TOTAL
25	Pambora, Chuk Joulee ...	0 15 10½	0 15 10½	0 11 6½	0 8 5½
	Total

JOLEE.

of the Ganges Canal.—(Continued.)

7.					8.	9.
REVENUE ON IRRIGATED AREA.					Difference of Revenue between irrigated and unirrigated rates.	Number of wells closed by Canal.
Meesun.	Roslee.	Dakur.	Bhoor.	Total.		
Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	
242 6 0	317 9 0	0 14 0	...	560 18 0	402 8 0	...
27 11 0	46 8 0	...	...	74 3 0	50 9 0	...
202 13 0	222 9 0	...	2 1 0	427 7 0	318 15 0	1
80 2 0	473 14 0	6 5 0	...	560 5 0	302 0 0	2
84 1 0	197 14 0	18 2 0	...	300 1 0	187 7 0	...
164 4 0	203 12 0	8 2 0	...	376 2 0	271 1 0	3
104 14 0	222 9 0	5 7 0	...	332 14 0	214 13 0	3
55 6 0	224 9 0	4 8 0	3 8 0	287 15 0	165 8 0	...
117 12 0	244 6 0	...	...	362 2 0	235 12 0	...
348 3 0	149 6 0	...	...	497 9 0	439 9 0	19
35 10 0	100 14 0	...	...	136 8 0	83 8 0	...
18 13 0	...	...	...	18 13 0	20 1 0	...
42 9 0	96 15 0	...	...	139 8 0	89 1 0	...
208 12 0	679 9 0	3 10 0	...	881 15 0	526 7 0	...
100 12 0	157 4 0	6 5 0	...	264 5 0	181 14 0	...
38 9 0	108 13 0	0 14 0	...	148 4 0	90 11 0	...
13 13 0	30 10 0	...	0 11 0	45 2 0	29 5 0	...
145 7 0	455 4 0	0 14 0	12 8 0	614 1 0	371 8 0	2
66 4 0	175 4 0	...	...	241 8 0	149 9 0	...
250 4 0	162 5 0	...	...	412 9 0	340 7 0	...
18 13 0	51 7 0	...	...	70 4 0	43 3 0	1
73 3 0	176 6 0	1 13 0	2 12 0	254 2 0	160 9 0	1
15 13 0	102 14 0	...	...	118 11 0	63 4 0	1
108 12 0	246 8 0	2 11 0	...	357 15 0	228 6 0	...
171 2 0	529 2 0	1 13 0	10 6 0	712 7 0	432 13 0	4
545 1 0	358 5 0	22 10 0	9 0 0	936 0 0	761 5 0	6
118 11 0	136 9 0	...	...	255 4 0	188 6 0	...
153 5 0	137 8 0	11 12 0	...	302 9 0	131 5 0	10
3,554 1 0	5,998 9 0	95 12 0	40 14 0	9,689 4 0	6,479 12 0	53
67 7 0	23 13 0	...	...	91 4 0	61 2 0	2
41 11 0	34 11 0	...	...	76 6 0	45 5 0	...
211 6 0	69 7 0	...	...	280 13 0	189 4 0	...
100 3 0	180 10 0	0 12 0	4 12 0	286 5 0	152 2 0	2
124 0 0	128 0 0	...	...	252 0 0	144 1 0	1
23 13 0	58 8 0	...	5 13 0	88 2 0	48 5 0	...
33 12 0	49 10 0	...	2 2 0	85 8 0	47 9 0	...
143 14 0	673 11 0	5 1 0	4 12 0	827 6 0	373 15 0	...
4 15 0	23 13 0	...	...	28 12 0	12 4 0	...
87 5 0	61 8 0	...	1 9 0	150 6 0	92 12 0	...
35 11 0	71 7 0	...	...	107 2 0	15 15 0	...
117 2 0	202 7 0	...	0 8 0	320 1 0	167 9 0	...
...	61 8 0	...	...	61 8 0	23 4 0	...
45 10 0	191 9 0	2 2 0	...	239 5 0	108 7 0	...
51 9 0	255 1 0	7 4 0	...	613 14 0	139 0 0	...
33 12 0	257 1 0	...	...	290 13 0	123 1 0	2
19 14 0	99 4 0	4 5 0	...	123 7 0	54 9 0	3
63 7 0	208 6 0	1 7 0	0 8 0	273 12 0	127 12 0	1
52 9 0	58 8 0	...	...	111 1 0	63 12 0	...
47 10 0	259 15 0	...	...	307 9 0	135 0 0	...
37 11 0	34 12 0	0 11 0	...	73 2 0	42 9 0	...
92 4 0	134 15 0	4 5 0	4 12 0	236 4 0	130 5 0	...
100 3 0	578 8 0	3 10 0	22 11 0	705 0 0	327 2 0	...
160 12 0	225 4 0	...	...	386 0 0	208 14 0	...
1,696 8 0	3,942 4 0	29 9 0	47 7 0	5,715 12 0	2,873 8 0	11
5,250 9 0	9,940 13 0	125 5 0	88 5 0	15,405 0 0	9,353 4 0	64
115 2 0	129 0 0	...	...	244 2 0	137 9 0	...
5,365 11 0	1,069 13 0	125 5 0	88 5 0	15,649 2 0	9,490 13 0	64

PERGUNNAH

Statement showing Profits due to the operation

1.	2.	10.				
Number.	Name of Mouzah.	TWENTY-TWO ACRES ALLOWED TO EACH WELL.				
		Meesun.	Roslee.	Dakur.	Bhoor.	Total.
1	Untwara	...	...	...	...	...
2	Untee	...	...	...	...	...
3	Bazeedpoor Kowalee	10	12	...	...	22
4	Bisanch	6	37	1	...	47
5	Bitora	...	...	...	...	...
6	Pal	29	36	1	...	66
7	Pulree	21	44	1	...	66
8	Talra	...	...	...	...	...
9	Tisung	...	...	...	...	...
10	Jansuth	293	125	...	...	418
11	Jitwara	...	...	...	...	...
12	Jundharree	...	...	...	...	...
13	Chittora	...	...	...	...	...
14	Choganwa	...	...	...	...	...
15	Ratour	...	...	...	...	...
16	Sadpoor	...	...	...	...	...
17	Salarpoor	...	...	...	...	...
18	Sikhara	5	49	...	2	66
19	Kowal	...	...	...	...	...
20	Kawalee	...	...	...	...	...
21	Khurtoulee	6	16	...	...	22
22	Khalwara	6	15	...	1	22
23	Kola Potha	3	19	...	...	22
24	Muhdour	...	...	...	...	...
25	Muhelkee	31	98	...	3	132
26	Nugla Churhao	89	59	4	2	154
27	Nugla Kubeerpoor	...	...	...	...	...
28	Nugla Muhasing	61	54	5	...	220
Total, Chuk Jansuth		570	564	12	8	1,154
1	Ahurwa	33	11	...	...	44
2	Bhundour	...	...	...	...	...
3	Bulharee	...	...	...	...	...
4	Bhulwa	15	28	1	...	44
5	Behra Asa	11	11	...	...	22
6	Toolseepoor	...	...	...	...	...
7	Jerahra	...	...	...	...	...
8	Jowlee	...	...	...	...	...
9	Chindoura	...	...	...	...	...
10	Chindouree	...	...	...	...	...
11	Duhakharee	...	...	...	...	...
12	Duhasree	...	...	...	...	...
13	Russoolpoor Kelour	...	...	...	...	...
14	Roorkulee Talib Ali	...	...	...	...	...
15	Roorkulee Futteh Ali	...	...	...	...	...
16	Kathka	5	39	...	...	44
17	Kumhara	14	70	4	...	88
18	Khojulhara	5	17	...	...	22
19	Khooknee	...	...	...	...	...
20	Kharee Ferozabad	...	...	...	...	...
21	Mutka	...	...	...	...	...
22	Muvee Sadat	...	...	...	...	...
23	Nugla Boozoorg	...	...	...	...	...
24	Nugla Mobarick	...	...	...	...	...
Total, Chuk Joulee		83	176	5	...	264
GRAND TOTAL		653	740	17	8	1,418
25	Pumbora, Chuk Joulee	...	...	...	...	...
Total		653	740	17	8	1,418

JOULEE.

of the Ganges Canal.—(Continued.)

11.

REVENUE DERIVABLE FROM WELL IRRIGATION.

Meesun.	Roslee.	Dakur.	Bhcor.	Total.
Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
...
...
20 8 0	17 3 0	...	...	37 11 0
12 5 0	53 1 0	1 5 0	...	66 11 0
...
59 6 0	51 10 0	1 5 0	...	112 5 0
43 0 0	63 2 0	1 5 0	...	107 7 0
...
...
599 12 0	179 5 0	...	...	779 1 0
...
...
...
...
...
...
30 11 0	70 5 0	...	2 10 0	103 10 0
...
...
12 5 0	22 5 0	...	...	35 4 0
12 5 0	21 8 0	...	1 5 0	35 2 0
6 2 0	27 4 0	...	...	33 6 0
...
63 7 0	130 10 0	...	3 15 0	198 0 0
182 3 0	84 10 0	5 5 0	2 10 0	274 12 0
...
124 14 0	77 7 0	6 10 0	...	208 15 0
1,166 14 0	799 0 0	15 14 0	10 8 0	1,992 4 0
58 0 0	15 1 0	73 1 0
...
...
26 6 0	38 5 0	1 0 0	...	65 11 0
19 5 0	15 1 0	34 6 0
...
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...
8 13 0	53 5 0	62 2 0
24 10 0	95 11 0	4 1 0	...	124 6 0
8 13 0	23 4 0	32 1 0
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...
145 15 0	240 11 0	5 1 0	...	391 11 0
1,312 13 0	1,039 11 0	20 15 0	10 8 0	2,383 15 0
...
1,312 13 0	1,039 11 0	20 15 0	10 8 0	2,383 15 0

PERGUNNAH

Statement showing Profits due to the operation

1.	2.	12.			
Number.	Name of Mouzah.	REVENUE ON WELL IRRIGATED AREA BY DRY RATE.			
		Meesun.	Roalee.	Dakur.	Bhoor.
		Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
1	Untwara	...	...	...	...
2	Untec	...	...	...	...
3	Bazeedpoor Kowalee	9 14 0	11 14 0	...	...
4	Bisanch	5 15 0	36 10 0	0 14 0	...
5	Bitora	...	...	...	...
6	Pal	28 11 0	35 10 0	0 14 0	...
7	Pulree	20 12 0	43 8 0	0 14 0	...
8	Talra	...	...	...	...
9	Tisung	...	...	...	...
10	Jansuth	289 14 0	123 10 0	...	...
11	Jitwara	...	...	...	...
12	Jundharee	...	...	...	...
13	Chittora	...	...	...	...
14	Choganwa	...	...	...	...
15	Ratour	...	...	...	...
16	Sadpoor	...	...	...	...
17	Salarpoor	...	...	...	...
18	Sikhara	14 13 0	48 8 0	...	1 6 0
19	Kowal	...	...	...	...
20	Kawalee	...	...	...	...
21	Khurtoulee	5 15 0	15 13 0	...	...
22	Khalwara	5 15 0	14 13 0	...	0 11 0
23	Kola Potha	2 15 0	18 13 0	...	...
24	Muhdour	...	...	...	...
25	Muhelkee	30 10 0	97 0 0	...	2 1 0
26	Nugla Churhao	88 0 0	58 6 0	3 10 0	1 6 0
27	Nugla Kubeerpoor	...	...	...	...
28	Nugla Muhasing	60 6 0	53 7 0	4 8 0	...
Total, Chuk Jansuth		563 12 0	558 0 0	10 2 0	5 8 0
1	Ahurwa	32 12 0	10 15 0	...	...
2	Bhundour	...	...	...	...
3	Bulharee	...	...	...	...
4	Bhulwa	14 14 0	27 13 0	0 11 0	...
5	Behra Asa	10 15 0	10 15 0	...	...
6	Toolseepoor	...	...	...	...
7	Jerahra	...	...	...	...
8	Joulee	...	...	...	...
9	Chindoura	...	...	...	...
10	Chindouree	...	...	...	...
11	Duhakharee	...	...	...	...
12	Duhasree	...	...	...	...
13	Russoolpoor Kelour	...	...	...	...
14	Roorkulee Talib Ali	...	...	...	...
15	Roorkulee Futteh Ali	...	...	...	...
16	Kathka	4 15 0	38 11 0	...	...
17	Kumhara	13 14 0	69 7 0	2 14 0	...
18	Khojulhara	4 15 0	16 4 0	...	...
19	Khooknee	...	...	...	...
20	Kharee Ferozabad	...	...	...	...
21	Mutka	...	...	...	...
22	Muvee Sadat	...	...	...	...
23	Nugla Boozoorg	...	...	...	...
24	Nugla Mobarick	...	...	...	...
Total, Chuk Joulee		82 5 0	174 11 0	3 9 0	...
GRAND TOTAL		646 1 0	732 11 0	14 5 0	5 8 0
25	Pumbora, Chuk Joulee	...	...	...	...
Total		646 1 0	732 11 0	14 5 0	5 8 0

JOLEE.

of the Ganges Canal.—(Concluded.)

			13.	14.	15.
			Difference of Revenue on area irrigated by wells.	Actual profits due to Canal.	Remarks.
Total.					
Rs.	As.	P.	Rs.	As.	P.
...
21	12	0	15	5	0
43	7	0	23	4	0
...
65	3	0	47	2	0
65	2	0	42	5	0
...
413	8	0	365	9	0
...
...
...
...
...
...
64	11	0	38	15	0
...
...
21	12	0	13	8	0
21	7	0	13	11	0
21	12	0	11	10	0
...
129	11	0	68	5	0
151	6	0	123	6	0
...
118	5	0	90	10	0
...
1,138	0	0	854	4	0
...
43	11	0	29	6	0
...
...
43	6	0	22	5	0
21	14	0	12	8	0
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S. N. MARTIN,
Collector.

Number.		Difference of Revenue between irrigated and unirrigated rates.	Difference of Revenue on area irrigated by wells.	Actual profits due to Canal.	Remarks.
17	402			12	As kutchia wells feasible at a cost of Rs- 40 only; Rs- 200 allowed for canal profits.
5	81			1	No deduction necessary; great natural capability.
13	319			3	Rs- 170 canal profits.
17	302			9	Rs- 100 ditto.
15	187			7	Rs- 150 ditto.
11	271			4	Rs- 100 ditto.
17	315			3	Rs- 100 ditto.
3	165			5	Rs- 100 ditto.
					Rs- 200 ditto.
					Rs- 70 ditto.
					No deduction necessary; considerable natural capability.
					No deduction ditto.
					Rs- 50 canal profits.
					Rs- 216 ditto.
					Rs- 95 ditto.
					Rs- 50 ditto.
					No deduction necessary; canal irrigation trifling.
					Rs- 150 canal profits.
					Rs- 100 ditto.
					No deduction necessary; jumma moderate.
					Rs- 30 canal profits.
					Rs- 50 ditto.
					Rs- 50 ditto.
					Rs- 100 ditto.
					Rs- 100 ditto.
					Rs- 350 ditto.
					Rs- 100 ditto.
					Rs- 40 ditto.
Jugla Kubeerpore ...					
Jugla Mahasing ...					
Total, Chuk Jansuth ...	9,821	6,480	854	5,626	

Abstract Statement A.—(Concluded.)

B.

Number.	Pergunnah.	Name of Mouzah.	Area irrigated by Canal.	Difference of Revenue between irrigated and unirrigated rates.	Difference of revenue on area irrigated by wells.	Actual profits due to Canal.	Remarks.
5	Joulee.	Behra Asa ...	254	Rs. 144	Rs. 13	Rs. 131	Rs. 50 canal profits.
6		Toolseepoor ...	94	48	...	48	Rs. 40 ditto.
7		Jerahra ...	88	48	...	48	No deduction necessary; jumma moderate.
8		Joulee ...	840	374	...	374	Rs. 150 canal profits.
9		Chindoura ...	29	13	...	13	No deduction necessary; canal irrigation very trifling.
10		Chindouree ...	153	93	...	93	Rs. 55 canal profits.
11		Duhakharee ...	109	56	...	56	No deduction necessary; much culturable area.
12		Dubaaree ...	323	168	...	168	No deduction necessary; jumma low; ditto as above.
13		Russoolpoor Kelour ...	62	23	...	23	No deduction; canal irrigation trifling.
14		Roorkulee Talib Ali ...	242	108	...	108	Rs. 50 canal profits.
15		Roorkulee Futtch Ali ...	319	139	...	139	Rs. 50 ditto.
16		Kathka ...	293	123	19	104	No deduction necessary; jumma below deduced rates.
17		Kumhara ...	126	54	38	16	No deduction necessary; ditto.
18		Khojulhara ...	276	128	19	118	No deduction necessary; jumma moderate.
19		Khooknee ...	112	63	...	63	Rs. 50 canal profits.
20		Kharee Ferozabad ...	310	135	...	135	No deduction necessary; original jumma low.
21		Mutka ...	74	43	...	43	Rs. 20 canal profits.
22		Muvee Sadat ...	244	130	...	130	Rs. 50 ditto.
23		Nugla Boozoorg ...	732	327	...	327	Rs. 100 ditto.
24		Nugla Mobarik ...	389	209	...	209	Rs. 150 ditto.
25		Pumbora ...	246	137	...	137	Rs. 100 ditto.
		Total, Chuk Joulee ...	6,060	3,010	131	2,879	
		GRAND TOTAL ...	15,881	9,490	985	8,505	Total canal profits, Rs. 3,716.

S. N. MARTIN,
Cllr.

PERGUNNAH

Statement showing Profits due to the

1. Number.	2.		3.		
	Name of Mouzah.		AREA IRRIGATED		
			Meesun.	Roslee.	Dakur.
1	Ahmudpoor	...	20	90	56
2	Ambhta Yakoobpoor	...	92	226	83
3	Oorungabad	...	64	313	185
4	Boonta	...	115	290	34
5	Bunehra Ooda	...	137	383	108
6	Thirwa	...	1	97	58
7	Janeepoor	...	3	9	68
8	Jusana, <i>alias</i> Mustgurh	...	84	98	80
9	Khownpoor	...	29	53	62
10	Oosmanpoor	...	77	153	54
11	Qadirpoor	...	...	20	12
12	Qazeepoor	...	62	77	29
13	Khaira Gudaie	...	159	241	49
14	Kylshikarpoor	...	286	294	132
15	Gurhee Ubdoola Khan, Puttee Seoom	...	52	211	32
16	Ditto, Puttee Huftoom	...	2	20	...
17	Ditto, Puttee Hushtoom	...	17	40	13
18	Goorhana	...	144	102	19
19	Mandulpoor	...	118	92	88
20	Heend	...	98	210	136
21	Yarpoor	...	94	135	128
22	Younispoor	...	21	50	11
23	Sohnunjee	...	15	120	125
24	Pultehree	...	2	7	4
Total, Chuk Bhainswal			1,692	3,271	1,566
1	Bhundora	...	125	57	...
2	Bhainsanee	...	169	256	160
3	Thana Bhowun, Puttee Kalroo,	...	...	8	1
4	Ditto Mehal Muzbutta	...	25	64	14
5	Ditto Mehal Baghian	...	6	54	26
6	Dubhairee	...	...	6	...
7	Gurhee Ubdoola Khan, Puttee Puchdoo	...	40	163	25
8	Gogwan	...	67	72	...
9	Loharee	...	...	3	1
10	Niralsa, <i>alias</i> Maroo Kheree	...	198	168	19
11	Munut Muntee	...	33	358	117
12	Nojul Nojlee	...	126	418	179
13	Hurrur Futtehpoor	...	9	7	...
14	Jellabad	...	...	26	...
Total, Chuk Bhesoree			798	1,660	542
GRAND TOTAL			2,490	4,931	2,108

THANA BHOWUN.

operation of the Eastern Jumna Canal.

		4.			
BY CANAL.		REVENUE RATE PER IRRIGATED ACRE.			
Bhoor.	Total.	Messan.	Bomla.	Dakur.	Bhoor.
		Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
33	198	4 11 8	1 14 8½	1 15 1	1 0 6½
33	434				
...	562				
...	379				
...	628				
...	156				
...	80				
...	262				
2	146				
...	284				
...	32				
...	168				
...	449				
...	712				
...	295				
...	22				
1	71				
...	265				
...	298				
...	444				
...	357				
1	83				
...	260				
...	13				
69	6,598
...	182	2 11 1½	1 12 1	1 7 2½	...
...	585				
...	9				
...	103				
...	86				
...	6				
...	228				
...	139				
...	4				
...	385				
...	508				
...	723				
...	16				
...	26				
...	3,000
69	9,598

PERGUNNAH

Statement showing Profits due to the operation

Number.	Name of Mouzah.	5.				
		REVENUE ON IRRIGATED AREA.				
		Meesun.	Roslee.	Dakur.	Rhoor.	Total.
		Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
1	Ahmudpoor ...	94 9 0	172 14 0	108 13 0	33 2 0	409 6 0
2	Ambehta Yakooobpoor ...	435 1 0	434 1 0	161 5 0	34 2 0	1,064 9 0
3	Oorungabad ...	302 11 0	601 3 0	353 9 0	...	1,263 7 0
4	Boonta ...	543 14 0	441 12 0	66 1 0	...	1,051 11 0
5	Bunehra Ooda ...	647 14 0	735 9 0	209 14 0	...	1,593 5 0
6	Thirwa ...	4 12 0	186 5 0	112 11 0	...	303 12 0
7	Janeepoor ...	14 3 0	17 5 0	132 2 0	...	163 10 0
8	Jusana, <i>alias</i> Mustgurh ...	397 4 0	188 3 0	155 8 0	...	740 15 0
9	Khanpoor ...	137 2 0	101 13 0	120 8 0	2 1 0	361 8 0
10	Oosmanpoor ...	364 2 0	293 14 0	104 15 0	...	762 15 0
11	Kadirpoor ...	...	38 7 0	23 5 0	...	61 12 0
12	Kazeepoor ...	293 3 0	147 14 0	56 6 0	...	497 7 0
13	Khaira Gudaie ...	751 15 0	462 14 0	95 4 0	...	1,310 1 0
14	Kylshikarpoor ...	1,352 9 0	564 10 0	256 8 0	...	2,173 11 0
15	Gurhee Ubdoola Khan, Puttee Seom ...	245 15 0	405 4 0	62 3 0	...	713 6 0
16	Ditto, Puttee Huftoom ...	9 7 0	38 7 0	...	...	47 14 0
17	Ditto, Puttee Hushtoom ...	80 7 0	76 13 0	25 4 0	1 1 0	183 9 0
18	Goorhana ...	681 0 0	195 14 0	36 15 0	...	913 13 0
19	Mandulpoor ...	558 1 0	176 11 0	171 0 0	...	905 12 0
20	Heend ...	463 7 0	403 5 0	264 5 0	...	1,131 1 0
21	Yarpoor ...	444 9 0	259 5 0	248 12 0	...	952 10 0
22	Younispoor ...	99 5 0	96 0 0	21 6 0	1 1 0	217 12 0
23	Sohunjee ...	70 15 0	230 8 0	242 15 0	...	544 6 0
24	Pultehree ...	9 7 0	13 7 0	7 12 0	...	30 10 0
Total, Chuk Bhainswal ...		8,001 12 0	6,282 6 0	3,043 5 0	71 7 0	17,398 14 0
1	Bhundora ...	336 15 0	100 0 0	...	...	436 15 0
2	Bhainsanee ...	455 8 0	449 4 0	232 6 0	...	1,137 2 0
3	Thana Bhowun, Puttee Kalroo ...	...	14 1 0	1 7 0	...	15 8 0
4	Ditto Mehal Muzbutta ...	67 6 0	112 5 0	20 5 0	...	200 0 0
5	Ditto Mehal Baghian ...	16 3 0	94 12 0	37 12 0	...	148 11 0
6	Dubhairee ...	...	10 8 0	...	...	10 8 0
7	Gurhee Ubdoola Khan, Puttee Puchdoo ...	107 13 0	285 15 0	36 5 0	...	430 1 0
8	Gogwan ...	180 9 0	126 6 0	...	...	306 15 0
9	Loharee ...	...	5 4 0	1 7 0	...	6 11 0
10	Niralsa, <i>alias</i> Maroo Kheree ...	533 11 0	294 13 0	27 9 0	...	856 1 0
11	Munut Munttee ...	88 15 0	628 4 0	169 14 0	...	887 1 0
12	Nojul Nojlee ...	339 10 0	733 9 0	259 15 0	...	1,333 2 0
13	Hurrur Futtchpore ...	24 4 0	12 5 0	...	...	36 9 0
14	Jellabad ...	...	45 10 0	...	...	45 10 0
Total, Chuk Bhearee ...		2,150 14 0	2,913 0 0	787 0 0	...	5,850 14 0
GRAND TOTAL ...		10,152 10 0	9,195 6 0	3,830 5 0	71 7 0	23,249 12 0

THANA BHOWUN.

of the Eastern Jumna Canal.—(Continued.)

6.				7.				
REVENUE RATE PER UNIRRIGATED ACRE.				REVENUE ON UNIRRIGATED AREA.				
Meesun.	Roalee.	Dakur.	Bhoor.	Meesun.	Roalee.	Dakur.	Bhoor.	Total.
Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
				26 1 0	117 5 0	69 8 0	25 11 0	238 9 0
				119 15 0	294 9 0	101 0 0	26 8 0	512 0 0
				83 7 0	408 7 0	229 9 0	...	721 7 0
				149 14 0	299 0 0	42 3 0	...	491 13 0
				178 9 0	499 3 0	134 0 0	...	811 12 0
				1 5 0	126 7 0	73 0 0	...	199 12 0
				3 15 0	11 12 0	84 6 0	...	100 1 0
				109 8 0	127 12 0	99 4 0	...	336 8 0
				37 13 0	69 1 0	76 15 0	1 10 0	185 7 0
				100 6 0	199 7 0	67 0 0	...	366 13 0
				...	26 1 0	14 14 0	...	40 15 0
				80 13 0	100 6 0	36 0 0	...	217 3 0
1 4 10½	1 4 10½	1 3 10½	0 12 10½	207 4 0	314 2 0	60 13 0	...	582 3 0
				372 12 0	383 3 0	163 13 0	...	919 12 0
				67 12 0	275 0 0	49 11 0	...	382 7 0
				2 10 0	26 1 0	...	...	28 11 0
				22 3 0	52 2 0	16 2 0	0 13 0	91 4 0
				187 11 0	132 15 0	23 9 0	...	344 3 0
				153 13 0	119 15 0	109 3 0	...	382 15 0
				127 12 0	273 11 0	168 12 0	...	570 3 0
				122 8 0	176 0 0	158 13 0	...	457 5 0
				27 6 0	65 3 0	13 10 0	0 13 0	107 0 0
				19 9 0	156 7 0	155 2 0	...	331 2 0
				2 10 0	9 2 0	4 15 0	...	16 11 0
...	...	...	...	2,205 8 0	4,263 15 0	1,941 2 0	55 7 0	8,466 0 0
				156 12 0	71 7 0	...	...	228 3 0
				211 15 0	321 0 0	173 2 0	...	706 1 0
				...	10 1 0	1 1 0	...	11 2 4
				31 6 0	80 4 0	15 2 0	...	126 12 0
				7 8 0	67 11 0	28 2 0	...	103 5 0
				...	7 8 0	...	...	7 8 0
1 4 0½	1 4 0½	1 1 3½	...	50 3 0	204 6 0	27 1 0	...	281 10 0
				84 0 0	90 4 0	...	...	174 4 0
				...	3 12 0	1 1 0	...	4 13 0
				248 4 0	210 11 0	20 9 0	...	479 8 0
				41 6 0	448 14 0	126 10 0	...	616 14 0
				158 0 0	524 2 0	193 11 0	...	875 13 0
				11 5 0	8 12 0	...	...	20 1 0
				...	32 10 0	...	...	32 10 0
...	...	...	...	1,000 11 0	2,081 6 0	586 7 0	...	3,668 8 0
...	...	...	...	3,206 3 0	6,345 5 0	2,527 9 0	55 7 0	12,134 8 0

PERGUNNAH

Statement showing Profits due to the operation

Number.	Name of Mousah.	8.	9.	10.		
		Difference of Revenue between irrigated and unirrigated rates.	Number of wells closed by Canal.	TWENTY-TWO ACRES ALLOWED		
				Meesun.	Roalee.	Dakur.
		Rs. As. P.				
1	Ahmudpoor	170 13 0	2	■	■	13
2	Ambehta Yakooobpoor	523 9 0	...	...	...	...
3	Oorungabad	542 0 0	■	10	49	29
4	Boonta	559 14 0	3	30	40	6
5	Bunehra Ooda	781 9 0	6	29	80	23
6	Thirwa	104 0 0	3	...	41	25
7	Janeepoor	43 9 0	...	...	...	...
8	Jusana, alias Mustgurb	404 7 0	5	35	41	34
9	Khanpoor	176 1 0	2	9	16	18
10	Oosmanpoor	396 2 0	3	18	36	12
11	Kadirpoor	20 13 0	...	...	...	...
12	Kazeepoor	280 4 0	3	24	30	12
13	Khaira Gudale	727 14 0	1	8	12	2
14	Kylshikarpoor	1,253 15 0	3	27	27	12
15	Gurhee Ubdoola Khan, Puttee Seoom	330 15 0	4	5	63	10
16	Ditto, Puttee Huftoom	19 3 0	...	...	...	...
17	Ditto, Puttee Hashoom	92 5 0	2	11	25	7
18	Goorhana	569 10 0	3	36	25	5
19	Mandulpoor	522 13 0	2	17	14	12
20	Heend	560 14 0	2	10	21	13
21	Yarpoor	495 5 0	3	46	66	64
22	Younispoor	110 12 0	1	6	13	3
23	Sohnunjee	213 4 0	4	5	41	42
24	Pultehree	13 15 0	...	...	...	...
	Total, Chuk Bhainswal	8,939 14 0	NI	330	660	343
1	Bhundora	208 12 0	...	...	...	...
2	Bhainsanee	431 1 0	...	...	...	...
3	Thana Bhowan, Puttee Kalroo,	4 6 0	...	...	...	...
4	Ditto Mehal Muzbutta	73 4 0	...	...	...	...
5	Ditto Mehal Baghian	45 6 0	...	...	...	...
6	Dubhaires	3 0 0	...	...	...	...
7	Gurhee Ubdoola Khan, Puttee Fuchdoo	148 7 0	8	NI	126	19
8	Gogwan	132 11 0	...	...	...	...
9	Loharee	1 14 0	...	...	...	...
10	Niralee, alias Maroo Kherce	376 9 0	...	...	...	...
11	Munut Muntce	270 3 0	3	4	47	15
12	Nojul Nojlee	457 5 0	6	23	76	33
13	Hurrur Futtehpore	16 8 0	...	...	...	...
14	...bad	13 0 0	...	...	...	...
	1, Chuk Bhesoree	2,183 6 0	17	58	249	67
	GRAND TOTAL	11,115 4 0	78	388	909	410

THANA BHOWUN.

of the Eastern Jumna Canal.—(Continued.)

		11.				
TO EACH WELL.		REVENUE DERIVABLE FROM WELL IRRIGATION.				
Bhoor.	Total.	Meesun.	Roslee.	Dakur.	Bhoor.	Total.
		Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
7	44	18 15 0	38 7 0	25 4 0	7 4 0	89 14 0
...
...	88	47 10 0	94 2 0	56 6 0	...	198 2 0
...	66	94 9 0	76 13 0	21 11 0	...	183 1 0
...	132	137 2 0	153 10 0	44 11 0	...	335 7 0
...	66	...	78 12 0	48 9 0	...	127 5 0
...
...	110	165 8 0	78 12 0	66 1 0	...	310 5 0
1	44	42 9 0	30 12 0	35 0 0	1 1 0	109 6 0
...	66	85 2 0	69 2 0	23 5 0	...	177 9 0
...
...	66	113 8 0	57 10 0	23 5 0	...	194 7 0
...	22	37 13 0	23 1 0	3 14 0	...	64 12 0
...	66	127 11 0	51 14 0	23 5 0	...	202 4 0
...
...	88	70 15 0	121 0 0	19 7 0	...	211 6 0
...
1	44	52 0 0	48 0 0	13 10 0	1 1 0	114 11 0
...	66	170 4 0	48 0 0	9 11 0	...	227 15 0
...	44	80 6 0	26 14 0	25 4 0	...	132 8 0
...	44	47 5 0	40 5 0	25 4 0	...	112 14 0
...	176	217 9 0	126 12 0	124 6 0	...	468 11 0
...	22	28 6 0	24 15 0	5 13 0	...	59 2 0
...	88	23 10 0	78 12 0	81 10 0	...	184 0 0
...
9	1,342	1,560 14 0	1,267 9 0	666 8 0	9 6 0	3,504 5 0
...
...
...
...
...
...	176	...	...	...	...	...
...	...	88 9 0	221 1 0	27 9 0	...	332 3 0
...
...
...
...	66	10 13 0	82 8 0	21 13 0	...	115 2 0
...	132	62 0 0	133 6 0	47 15 0	...	243 5 0
...
...
...	374	156 6 0	436 15 0	97 5 0	...	690 10 0
9	1,716	1,717 4 0	1,704 8 0	763 13 0	9 6 0	4,194 15 0

PERGUNNAH

Statement showing profits due to the operation

Number.	Name of Mouzah.	12.		
		REVENUE ON WELL-IRRIGATED AREA		
		Meesun.	Roslee.	Dakur.
		Rs. As. P.	Rs. As. P.	Rs. As. P.
1	Ahmudpoor ...	5 3 0	26 1 0	16 2 0
2	Ambahta Yakoobpoor ...	...	...	...
3	Oorungabad ...	13 1 0	63 14 0	36 0 0
4	Boonta ...	26 1 0	52 2 0	7 7 0
5	Bunehra Ooda ...	37 13 0	104 4 0	28 9 0
6	Thirwa ...	...	53 7 0	31 0 0
7	Janeepoor ...	...	...	...
8	Jusana, alias Mustgurb ...	45 10 0	53 7 0	42 3 0
9	Khownpoor ...	11 12 0	20 14 0	22 5 0
10	Oosmanpoor ...	23 7 0	46 15 0	14 14 0
11	Qadirpoor ...	...	...	...
12	Qazeepoor ...	31 4 0	39 2 0	14 14 0
13	Khaira Gudale ...	10 7 0	15 10 0	2 8 0
14	Kylahikarpoor ...	35 3 0	35 3 0	14 14 0
15	Gurhee Ubdoola Khan, Puttee Seoom ...	19 9 0	82 2 0	12 7 0
16	Ditto, Puttee Huftoom ...	...	...	...
17	Ditto, Puttee Hushtoom ...	14 5 0	32 9 0	8 11 0
18	Goorhana ...	48 14 0	32 9 0	6 3 0
19	Mandulpoor ...	22 3 0	18 4 0	16 2 0
20	Heend ...	13 1 0	27 6 0	16 2 0
21	Yarpoor ...	59 15 0	86 0 0	79 7 0
22	Younispoor ...	7 13 0	17 1 0	3 12 0
23	Sohunjee ...	6 8 0	53 7 0	52 2 0
24	Pultehree ...	...	...	...
	Total, Chuk Bhainswal ...	430 1 0	860 5 0	425 10 0
1	Bhundora ...	...	...	...
2	Bhainsanee ...	...	...	...
3	Thana Bhowun, Puttee Kalroo ...	...	...	...
4	Ditto Mehal Muzbutta ...	...	...	...
5	Ditto Mehal Baghian ...	...	...	...
6	Dubhairee ...	...	...	...
7	Gurhee Ubdoola Khan, Puttee Pachdoo ...	38 14 0	158 0 0	20 9 0
8	Gogwan ...	...	...	...
9	Loharee ...	...	...	...
10	Niralsa, alias Maroo Kheree ...	...	...	...
11	Munut Munttee ...	5 0 0	58 15 0	16 4 0
12	Nojul Nojlee ...	28 13 0	95 5 0	35 11 0
13	Hurrur Futtehpoor ...	...	...	...
14	Jellabad ...	...	...	...
	Total, Chuk Bhesoree ...	72 11 0	312 4 0	72 8 0
	GRAND TOTAL ...	502 12 0	1,172 9 0	498 2 0

THANA BHOWUN.

of the Eastern Jumna Canal.—(Concluded.)

		13.	14.	15.
BY DRY RATES.				
Bhoor.	Total.	Difference of Revenue on area irrigated by wells.	Actual profits due to Canal.	Remarks.
Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	
5 10 0	53 0 0	36 14 0	133 15 0	
...	...	...	522 9 0	
...	112 15 0	85 3 0	456 19 0	
...	85 10 0	97 7 0	462 7 0	
...	170 10 0	164 13 0	616 12 0	
...	84 7 0	42 14 0	61 2 0	
...	...	...	63 9 0	
...	141 4 0	169 1 0	235 6 0	
0 13 0	55 12 0	53 10 0	122 7 0	
...	85 4 0	92 5 0	303 13 0	
...	...	...	20 13 0	
...	85 4 0	109 3 0	171 1 0	
...	28 9 0	36 3 0	691 11 0	
...	85 4 0	117 10 0	1,136 5 0	
...	114 2 0	97 4 0	233 11 0	
...	...	...	19 3 0	
0 13 0	56 6 0	58 5 0	34 0 0	
...	85 10 0	142 5 0	427 5 0	
...	56 9 0	75 15 0	446 14 0	
...	56 9 0	56 5 0	504 9 0	
...	225 6 0	243 5 0	252 0 0	
...	28 10 0	30 8 0	80 4 0	
...	112 1 0	71 15 0	141 5 0	
...	...	...	13 15 0	
7 4 0	1,723 4 0	1,781 1 0	7,151 13 0	
...	...	...	208 12 0	
...	...	...	431 1 0	
...	...	...	4 6 0	
...	...	...	73 4 0	
...	...	...	45 6 0	
...	...	...	3 0 0	
...	217 7 0	114 12 0	33 11 0	
...	...	...	132 11 0	
...	...	...	1 14 0	
...	...	...	376 9 0	
...	80 3 0	34 15 0	235 4 0	
...	159 13 0	83 8 0	373 13 0	
...	...	...	16 8 0	
...	...	...	13 0 0	
...	457 7 0	233 3 0	1,949 3 0	
7 4 0	2,180 11 0	2,014 4 0	9,101 0 0	Rs. 6,024 allowed as profits due to Canal.

S. N. MARTIN,
Collector.

Abstract of Statement A.

B.

1.	2.	3.	4.	5.	6.	7.	8.
Number.	Pergunnah.	Name of Mouzah.	Area irrigated by Canal.	Difference of Revenue between irrigated and unirrigated rates.	Difference of Revenue on area irrigated by wells.	Actual profits due to Canal.	Remarks.
1	THANA BHOWAN.	Ahmudpore ...	198	171	37	134	Rs 106 allowed.
2		Ambehta Yakoobpoor, ...	434	523	...	523	Rs 300 ditto.
3		Oorungabad ...	562	542	65	457	Rs 436 ditto.
4		Boonta ...	379	560	98	462	Rs 300 ditto.
5		Bunehra Ooda ...	628	711	165	617	Rs 500 ditto.
6		Thirwa ...	156	104	111	61	Rs 61 ditto.
7		Janacpoor ...	80	64	...	64	Rs 57 ditto.
8		Jusana, alias Mustgurb, ...	262	404	169	185	Rs 230 ditto.
9		Khanpoor ...	146	176	54	122	Rs 121 ditto.
10		Oosmanpoor ...	284	396	92	304	Rs 371 ditto.
11		Kadirpoor ...	32	21	...	21	No deduction necessary—canal-irrigated area being a mere trifle.
12		Kaseepoor ...	168	280	109	171	Rs 146 allowed as canal profits.
13		Khaira Gudale ...	449	728	111	672	Rs 400 ditto.
14		Kylahikarpoor ...	712	1,254	118	1,136	Rs 280 ditto.
15		Gurhee U'doolia Khan, Puttee Seoom ...	395	331	97	234	Rs 200 ditto.
16		Ditto, Puttee Huftoom, ...	22	11	...	19	No deduction necessary.
17		Ditto, Puttee Hushtoom, ...	71	92	58	34	Ditto ditto.
18		Goorhana ...	265	569	142	497	Rs 398 allowed.
19		Mandulpoor ...	298	523	76	447	Rs 370 ditto.
20		Heend ...	444	561	56	505	Rs 140 ditto.
21		Yarpoor ...	357	495	243	352	Rs 250 ditto.
22		Younispoor ...	83	111	31	80	Rs 80 ditto.
23		Sohunjee ...	260	213	72	141	Rs 144 allowed for Canal profits.
24		Pultehree ...	13	14	...	11	No deduction necessary—area irrigated being limited.
		Total, Chuk Bhainswal,	6,598	8,933	1,781	7,152	
1		Bhundora ...	182	209	...	209	Rs 100 only allowed for Canal profits.
2		Bhainsanee ...	585	431	...	431	Rs 369 ditto.
3		Thana Bhowan, Puttee Kalroo ...	9	4	...	4	No deduction necessary; area irrigated trifling.
4		Ditto Mehal Musbutta,	103	73	...	73	No deduction necessary; culturable area extensive.

Abstract of Statement A.—(Concluded.)

B.

1.	2.	3.	4.	5.	6.	7.	8.
Number.	Pergunnah.	Name of Mouzah.	Area irrigated by Canal.	Difference of Revenue between irrigated and unirrigated rates.	Difference of Revenue on area irrigated by wells.	Actual profits due to Canal.	Remarks.
5	THANA BHOWUN.—(Concluded.)	Thana Bhowun, Mehal Baghian ...	86	45	...	45	No deduction appears necessary; canal irrigation limited, and much culturable land.
6		Dubhaihree ...	6	3	...	3	No deduction necessary; ditto.
7		Gurhee Ubdoolia Khan, Puttee Puchdoo ...	228	148	115	33	Rs 35 allowed for canal profits.
8		Gogwan ...	139	133	...	133	No deduction necessary; assessment independent of canal.
9		Loharee ...	4	2	...	2	No deduction necessary; canal irrigation insignificant.
10		Niralsa, alias Maroo Kheree ...	385	377	...	377	Rs 277 allowed as canal profits.
11		Munnt Munttee ...	508	270	35	235	Rs 235 ditto.
12		Nojul Nojlee ...	723	457	83	374	Rs 368 ditto.
13		Hurrur Futtehpore ...	16	17	...	17	No deduction necessary; assessment independent of Canal.
14		Jellabad ...	26	13	...	13	No deduction necessary; canal irrigated area very trifling.
		Total, Chuk Bhearee	3,000	2,182	233	1,949	
		GRAND TOTAL ...	9,598	11,115	2,014	9,101	Rs 6,024 allowed as profits due to Canal.

The average depth of water in this Pergunnah is 15½ feet.

In this Statement no attempt has been made to show what amount of land would be thrown out of cultivation if the Canal stopped. I have no data from which I could make the calculation.

S. N. MARTIN,

Collector.

PERGUNNAH

Statement showing profits due to the

1.	2.	3.					4.			
		AREA IRRIGATED BY CANAL.					REVENUE RATE PER IRRIGATED ACRE.			
		Meesun.	Boslee.	Dakur.	Bhoor.	Total.	Meesun.	Boslee.	Dakur.	Bhoor.
No.	Name of Mourah.						Rs. As. P.	Rs. As. P.		
1	Chuk Koodana. Khurur ...	44	156	...	...	200	3 4 2	2 2 1 6 1	...	...
	Total ...	44	156	...	...	200	...	...	...	...

BOORHANA.

operation of the Eastern Jumna Canal.

5.					6.			
REVENUE ON IRRIGATED AREA.					REVENUE RATE PER UNIRRIGATED ACRE.			
Meesun.	Roslee.	Dakur.	Bhoor.	Total.	Meesun.	Roslee.	Dakur.	Bhoor.
Ra. As. P.	Ra. As. P.			Ra. As. P.	Ra. As. P.	Ra. As. P.		
143 5 0	326 15 0	470 4 0	1 4 10	1 4 10
143 5 0	326 15 0	470 4 0

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eration

BOORHANA.

of the Eastern Jumna Canal.—Concluded.

9.
Number of wells closed by Canal.

10.						11.						12.						13.	14.			15.
TWENTY-TWO ACRES ALLOWED TO EACH WELL.						REVENUE DERIVABLE FROM WELL IRRIGATION.						REVENUE ON WELL- IRRIGATED AREA BY DRY RATES.						Difference of revenue on area irri- gated by wells.	Actual profits due to Canal.			Remarks.
Meesun.	Roslec.	Dakur.	Bhoor.	Total.	Meesun.	Roslec.	Dakur.	Bhoor.	Total.	Meesun.	Roslec.	Dakur.	Bhoor.	Total.	Rs.	As.	P.					
...	209	15	0			
...	209	15	0			

S. N. MARTIN,
Collector.

*Abstract of Statement A.
B.*

No.	Pergunnah.	Name of Mouzah.	Area irrigated by Canal.	Difference of revenue between irrigated and unirrigated rates.	Difference of revenue on area irrigated by wells.	Actual profits due to Canal.	Remarks.
1	Boorhana ...	<i>Chuk Koodana.</i> Khurur ...	200	210	...	210	
		Total ...	200	210	...	210	Profits due to canal, Rs. 210 no kutchas wells to be seen.

S. N. MARTIN,
Collector.

PERGUNNAH SHIKARPORE.

Statement showing profits due to the operation of the Eastern Jumna Canal.

1.	2.	3.					4.			
Number.	Name of Mouzah.	AREA IRRIGATED BY CANAL.					REVENUE RATE PER IRRIGATED ACRE.			
		Meesun.	Roslee.	Dakur.	Bhoor.	Total.	Meesun.	Roslee.	Dakur.	Bhoor.
							Rs As.P.	Rs As.P.	Rs As.P.	Rs As.P.
1	Bhora Khoord ...	...	67	...	...	67				
2	Bhora Kullan ...	372	535	36	...	943				
3	Jeethpore ...	27	88	5	...	120				
4	Seesolee ...	76	98	17	...	191				
							3 4 2	2 1 6½	1 10 5½	...
5	Allawulpore ...	142	113	17	...	272				
6	Gurhee Noabad...	27	41	...	...	68				
7	Mahomedpore Rai Singh ...	11	57	3	...	71				
8	Moondbbhur ...	24	77	32	...	133				
	Total, Chuk Koodana ...	679	1,076	110	...	1,865				

PERGUNNAH

Statement showing profits due to the operation

1.	2.	5.				
Number.	Name of Mouzah.	REVENUE ON IRRIGATED AREA.				
		Meesun.	Roslee.	Dakur.	Bhcor.	Total.
		Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs.	Rs. As. P.
1	Bhora Khoord ... ..	...	140 7 0	...	...	140 7 0
2	Bhora Kullan	1,212 10 0	1,121 3 0	59 8 0	...	2,393 5 0
3	Jeethpore	88 0 0	184 7 0	8 4 0	...	280 11 0
4	Seesolee	247 12 0	205 6 0	28 2 0	...	481 4 0
5	Allawulpore	462 14 0	236 13 0	28 1 0	...	727 12 0
6	Gurhee Noabad	88 0 0	85 15 0	...	...	173 15 0
7	Mahomedpore Rai Singh ...	35 14 0	119 7 0	4 15 0	...	160 4 0
8	Moondhbhur	78 4 0	161 6 0	52 14 0	...	292 8 0
	Total, Chuk Koodana ...	2,213 6 0	2,255 0 0	131 12 0	...	4,650 2 0

SHIKARPORE.

of the Eastern Jumna Canal.—(Continued.)

6.				7.				
REVENUE RATE PER UNIRRIGATED ACRE.				REVENUE ON UNIRRIGATED AREA.				
Meesun.	Roslee.	Dakur.	Bhoor.	Meesun.	Roslee.	Dakur.	Bhoor.	Total.
Rs As. P.	Rs As. P.	Rs As. P.	Rs	Rs As. P.	Rs As. P.	Rs As. P.	Rs As. P.	Rs As. P.
				...	87 4 0	...	...	87 4 0
				484 4 0	696 7 0	48 6 0	...	1,329 1 0
				35 2 0	114 9 0	6 12 0	...	156 7 0
				98 15 0	127 9 0	22 14 0	...	249 6 0
1 4 10	1 4 10	1 5 6	...	184 14 0	147 2 0	22 14 0	...	354 14 0
				35 2 0	53 6 0	...	...	88 8 0
				14 5 0	74 3 0	4 1 0	...	92 9 0
				31 4 0	100 4 0	43 0 0	...	174 8 0
...	...	...	...	883 14 0	1,400 12 0	147 15 0	...	2,432 9 0

PERGUNNAH

Statement showing profits due to the operation

Number.	Name of Mouzah.	8.			9.	10.				
		Difference of Revenue between irrigated and unirrigated rate.				TWENTY TWO ACRES ALLOWED TO EACH WELL.				
						Meesun.	Roslee.	Dakur.	Bhoor.	Total.
		Rs.	As.	P.						
1	Bhora Khoord	53	3	0	1	...	22	...	...	22
2	Bhora Kullian	1,164	4	0	...	...	...	...	...	...
3	Jeethpore	124	4	0	...	...	...	...	...	...
4	Seesolee	231	14	0	...	...	...	...	...	...
5	Allawulpore	372	14	0	...	...	...	...	...	...
6	Gurhee Noabad	85	7	0	...	...	...	...	...	...
7	Mahomedpore Rai Singh,	67	11	0	...	...	...	...	...	...
8	Moondhbhur	118	0	0	...	...	...	...	...	...
Total, Chuk Koodana ...		2,217	9	0	1	...	22	...	...	22

SHIKARPORE.

of the Eastern Jumna Canal.—(Continued.)

11.					12.				
REVENUE DERIVABLE FROM WELL IRRIGATION.					REVENUE ON WELL-IRRIGATED AREA BY DRY RATE.				
Meesun.	Roslee.	Dakur.	Bhoor.	Total.	Meesun.	Roslee.	Dakur.	Bhoor.	Total.
Rs As.P.	Rs As. P.	Rs As.P.	Rs As.P.	Rs As. P.	Rs As.P.	Rs As. P.	Rs As.P.	Rs As.P.	Rs As. P.
...	46 2 0	...	...	46 2 0	...	28 10 0	...	...	28 10 0
...
...
...
...
...
...
...
...
...	46 2 0	...	...	46 2 0	...	28 10 0	...	...	28 10 0

PERGUNNAH SHIKARPORE.

Statement showing profits due to the operation of the Eastern Jumna Canal.—(Concluded.)

Number.	Name of Mouzah.	13.	14.	15.
		Difference of revenue on area irrigated by wells.	Actual profits due to canal.	Remarks.
		Rs. As. P.	Rs. As. P.	
1	Bhora Khoord	17 8 0	35 11 0	
2	Bhora Kullan ... ..	...	1,164 4 0	
3	Jeethpore ... ..	...	124 4 0	
4	Seemolee ... ..	...	231 14 0	
5	Allawulpore ... ..	...	372 14 0	
6	Gurhee Noabad ... ..	...	85 7 0	
7	Mahomedpore Rai Singh ... ..	...	67 11 0	
8	Moondhbhur ... ..	...	118 0 0	
	Total, Chuk Koodana ...	17 8 0	2,200 1 0	Rs 2,277 allowed as canal profits.

S. N. MARTIN,

Collector.

Abstract of Statement A.

B.

1.	2.	3.	4.	5.	6.	7.	8.
Number.	Pergunnah.	Name of Mouzah.	Area irrigated by canal.	Difference of revenue between irrigated and unirrigated rates.	Difference of revenue on area irrigated by wells.	Actual profits due to canal.	Remarks.
1	SUKARPORE.	Bhora Khoord... ..	67	53	17	36	Allowed Rs. 36 as canal profits.
2		Bhora Kullian	943	1,164	...	1,164	Ditto 1,160 do.
3		Jeethpore	120	124	...	124	Ditto 128 do.
4		Seesolee	191	232	...	232	Rs. 308 allowed as profits due to canal.
5		Allawulpore	272	373	...	373	Rs. 371 ditto ditto.
6		Gurhee Noabad	68	85	...	85	Rs. 83 ditto ditto.
7		Mahomedpore Rai Singh ...	71	68	...	68	Rs. 67 ditto ditto.
8		Moondhbhur	133	118	...	118	Rs. 124 ditto ditto.
		Total, Chuk Koodana ...	1,865	2,217	17	2,200	Rs. 2,277 allowed as canal profits.

Average depth of water, 32 feet 7 inches. Kutchia wells are not known on the opposite side of the "Hindun;" consequently I have not thought it just to make any calculation based upon possible wells, seeing that none can be traced.

S. N. MARTIN,
Collector.

PERGUNNAH

Statement showing profits due to the

1.	2.	3.				
		AREA IRRIGATED BY CANAL.				
		Meesun.	Roalee.	Dakur.	Bhoor.	Total.
Number.	Name of Mouzah.					
1	Atalee	11	6	...	...	17
2	Boodeena Kulan	347	530	26	...	903
3	Peepulhaira	316	195	23	...	534
4	Jusoe	28	175	3	...	206
5	Churolee ... ..	...	2	...	...	2
6	Chuttalla	156	521	52	...	729
7	Sonhujnee	289	238	8	...	525
8	Salakharee	259	151	64	...	474
9	Aleespoora Kulan	250	164	...	...	414
10	Kumrooddeen Nuggur ... ..	...	5	...	...	5
11	Lalookharee	62	122	20	...	204
12	Laburda	168	261	87	...	516
13	Muhmedpore Mandun	25	22	1	...	48
14	Nugla Puthora	55	195	6	...	256
	Total, Chuk Koodana	1,966	2,577	290	...	4,833
1	Tahurpore, Chuk Jhukwala	3	44	...	...	47
	GRAND TOTAL	1,969	2,621	290	...	4,880

BUGRAH.

operation of the Eastern Jumna Canal.

4.				5.				
REVENUE RATE PER IRRIGATED ACRE.				REVENUE ON IRRIGATED AREA.				
Meesun.	Roalee.	Dakur.	Bhoor.	Meesun.	Roalee.	Dakur.	Bhoor.	Total.
				44 9 0	15 12 0	...	...	60 5 0
				1,405 6 0	1,388 8 0	53 11 0	...	2,847 9 0
				1,379 13 0	510 14 0	47 8 0	...	1,888 3 0
				113 6 0	458 7 0	6 3 0	...	578 0 0
				...	5 4 0	...	...	5 4 0
				631 13 0	1,364 15 0	107 6 0	...	2,104 2 0
4 0 9½	2 9 11	2 1 0½	...	1,170 8 0	597 5 0	16 8 0	...	1,784 5 0
				1,049 0 0	395 9 0	132 3 0	...	1,576 12 0
				1,012 9 0	429 10 0	...	...	1,442 3 0
				...	13 2 0	...	...	13 2 0
				251 2 0	319 10 0	41 5 0	...	612 1 0
				680 7 0	683 12 0	179 11 0	...	1,543 14 0
				101 4 0	57 10 0	2 1 0	...	160 15 0
				222 12 0	510 14 0	12 6 0	...	746 0 0
				7,962 9 0	6,751 4 0	598 14 0	...	15,312 11 0
3 0 3½	1 15 9½	...	...	9 1 0	87 7 0	...	...	96 8 0
...	...	...	...	7,971 10 0	6,838 11 0	598 14 0	...	15,409 3 0

PERGUNNAH

Statement showing profits due to the operation

Number.	Name of Mouzah.	6.			
		REVENUE RATE PER UNIRRIGATED ACRE.			
		Meesun.	Roslee.	Dakur.	Bhoor.
1	Atalee				
2	Bóodeena Kulan				
3	Peepulhaira				
4	Jusoe				
5	Churolee				
6	Chuttalla				
7	Sonhujnee	1 10 1½	1 10 0½	1 10 10½	...
8	Salahkharee				
9	Aleepoora Kullán				
10	Kumrooddeen Nuggur... ..				
11	Lalookharee				
12	Laburda				
13	Muhmedpore Mandun... ..				
14	Nugla Puthora				
	Total, Chuk Koodana				
1	Tahurpore, Chuk Jhukwala	1 5 6½	1 5 6½	...	...
	GRAND TOTAL ... ..	...	...	...	...

BUGRAH.

of the Eastern Jumna Canal.—(Continued.)

7.					8.	9.	10.				
REVENUE ON UNIRRIGATED AREA.					Difference of revenue between irrigated and unirrigated rates.	Number of wells closed by canal.	TWENTY-TWO ACRES ALLOWED TO EACH WELL.				
Meesun.	Roslee.	Dakur.	Bhoor.	Total.			Meesun.	Roslee.	Dakur.	Bhoor.	Total.
17 14 0	9 12 0	...	...	27 10 0	32 11 0	...	...	...	...	...	...
564 9 0	862 5 0	43 11 0	...	1,470 9 0	1,377 0 0	13	135	207	10	...	352
514 2 0	317 4 0	38 10 0	...	870 0 0	968 3 0	...	...	...	...	...	...
45 9 0	284 12 0	5 1 0	...	335 6 0	242 10 0	6	18	112	2	...	132
...	3 4 0	...	...	3 4 0	2 0 0	...	...	...	...	...	...
253 13 0	847 10 0	87 6 0	...	1,188 13 0	915 5 0	8	66	220	22	...	308
470 3 0	370 15 0	13 7 0	...	854 9 0	929 12 0	...	...	...	...	...	...
421 6 0	245 11 0	107 8 0	...	774 9 0	802 3 0	...	...	...	...	...	...
406 12 0	266 13 0	...	...	673 9 0	768 10 0	4	66	44	...	...	110
...	8 2 0	...	...	8 2 0	5 0 0	...	...	...	...	...	...
100 14 0	198 8 0	33 10 0	...	333 0 0	279 1 0	...	...	...	...	...	...
273 5 0	424 10 0	146 2 0	...	844 1 0	699 13 0	1	14	15	15	...	44
40 11 0	35 13 0	1 11 0	...	78 3 0	82 12 0	...	...	...	...	...	...
89 8 0	317 4 0	10 1 0	...	416 13 0	329 3 0	4	19	67	2	...	88
3,198 10 0	4,192 11 0	487 3 0	...	7,878 8 0	7,434 3 0	36	318	665	51	...	1,034
4 0 0	59 5 0	...	...	63 5 0	33 3 0	...	...	...	...	...	...
3,202 10 0	4,252 0 0	487 3 0	...	7,941 13 0	7,467 6 0	36	318	665	51	...	1,034

PERGUNNAH

Statement showing profits due to the operation

Number.	Name of Mouzah.	11.				
		REVENUE DERIVABLE FROM WELL IRRIGATION.				
		Moesun.	Roslee.	Dakur.	Bhoor.	Total.
1	Atalee ...	...	...	...	...	...
2	Boodeena Kulan ...	546 12 0	542 5 0	20 10 0	...	1,109 11 0
3	Peepulhaira ...	...	...	...	...	...
4	Jusoe ...	72 14 0	293 7 0	4 2 0	...	370 7 0
5	Churolee ...	...	...	...	...	...
6	Chuttalla ...	267 5 0	576 6 0	45 7 0	...	889 2 0
7	Sonhojase ...	...	...	...	...	...
8	Salakharee ...	...	...	...	...	...
9	Alespoora Kulan ...	267 5 0	115 4 0	...	...	382 9 0
10	Kumrooddeen Nuggur ...	...	...	...	...	...
11	Lalookharee ...	...	...	...	...	...
12	Laburda ...	56 11 0	89 5 0	30 15 0	...	126 15 0
13	Mahmedpore Mandun ...	...	...	...	...	...
14	Nugla Puthora...	76 15 0	175 8 0	4 2 0	...	256 9 0
	Total, Chuk Koodana ...	1,287 14 0	1,742 3 0	105 4 0	...	3,135 5 0
1	Tahurpore (Chuk Jhuk-wala) ...	...	...	...	...	...
	GRAND TOTAL ...	1,287 14 0	1,742 3 0	1 105 4 0	...	3,135 5 0

BUGRAH.

of the Eastern Jumna Canal.—(Concluded.)

12.					13.	14.	15.
REVENUE ON WELL IRRIGATED AREA BY DRY RATES.							
Meesun.	Roslee.	Dakur.	Bhoor.	Total.	Difference of Revenue on area irrigated by wells.	Actual profits due to canal.	Remarks.
...	...	...	...	...	...	32 11 0	
219 10 0	336 13 0	16 18 0	...	573 4 0	536 7 0	840 9 0	
...	...	...	...	...	...	968 3 0	
29 5 0	182 4 0	3 6 0	...	214 15 0	155 8 0	87 2 0	
...	...	...	...	...	...	2 0 0	
107 6 0	357 15 0	36 15 0	...	502 4 0	386 14 0	528 7 0	
...	...	...	...	...	...	929 12 0	
...	...	...	...	...	...	802 3 0	
107 6 0	71 9 0	...	...	178 15 0	203 10 0	565 0 0	
...	...	...	...	...	...	5 0 0	
...	...	...	...	...	...	279 1 0	
22 12 0	24 6 0	25 3 0	...	72 5 0	54 10 0	645 3 0	
...	...	...	...	...	...	82 12 0	
30 15 0	109 0 0	3 6 0	...	143 5 0	113 4 0	215 15 0	
517 6 0	1,081 15 0	85 11 0	...	1,685 0 0	1,450 5 0	5,983 11 0	
...	...	...	...	...	...	38 3 0	
517 6 0	1,081 15 0	85 11 0	...	1,685 0 0	1,450 5 0	6,017 1 0	Actual profit allowed Ra. 3,227: see abstract.

S. N. MARTIN,
Collector.

Abstract Statement A.

B.

Number.	Pergunnah.	Name of Mouzah.	Area irrigated by Canal.	Difference of revenue between irrigated and unirrigated rates.	Difference of revenue on area irrigated by wells.	Actual profits due to canal.	Remarks.
1	BUGRAH.	Atalee	17	33	...	33	No reduction necessary.
2		Boodeena Kulan ...	903	1,377	536	841	Rs. 840 allowed.
3		Peepulhaira	534	968	...	968	Rs. 200 only allowed; the revised jumma moderate.
4		Jasoe	206	242	155	87	Rs. 87 allowed.
5		Churolee	2	2	...	2	No deduction necessary.
6		Chuttaila	729	915	387	528	Rs. 300 allowed.
7		Sonhujnee	525	930	...	930	Rs. 500 allowed.
8		Salahkharee	474	802	...	802	Rs. 400 do.
9		Aleepoora Kullan ...	414	769	204	565	Rs. 350 do.
10		Kumrooddeen Nuggur ...	5	5	...	5	No reduction necessary.
11		Lalookharee	204	279	...	279	Rs. 200 allowed.
12		Laburda	516	700	55	645	Rs. 200 do.
13		Muhmedpore Mandun ...	48	83	...	83	Rs. 83 do.
14		Nugla Puthora	256	329	113	216	Rs. 150 do.
		Total, Chuk Koodana ...	4,833	7,434	1,450	5,984	
1		Tahurpore (Chuk Jhuk-wala) ...	47	33	...	33	No reduction necessary; revised assessment very moderate.
		GRAND TOTAL ...	4,880	7,467	1,450	6,017	Rs. 3,227 allowed altogether, as a deduction on account of canal profits.

Average depth of water in this pergunnah is between 23 and 24 feet from surface; kutchu wells can be dug in a few places, but they are not customary.

S. N. MARTIN,
Collector.

PERGUNNAH JHINJHANA.

Statement showing Profits due to the operation of the Eastern Jumna Canal.

1.	2.	3.					4.			
No.	Name of Mouzah.	AREA IRRIGATED BY CANAL.					REVENUE RATE PER IRRIGATED ACRE.			
		Meesun.	Roslee.	Dakur.	Bhoor.	Total.	Meesun.	Roslee.	Dakur.	Bhoor.
							Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
1	Ambhta ...	76	279	83	...	438	3 12 0	1 8 4½	1 8 8	0 13 1½
2	Bhatoo ...	46	419	26	...	491				
3	Pelka ...	22	176	56	...	254				
4	Peer Khara ...	...	...	3	...	3		
5	Pindoora ...	6	14	1	...	21				
6	Tana ...	86	181	162	...	429				
7	Tuprana Afghanan ...	8	157	72	...	237				
8	Tuprana Jatan ...	28	145	27	...	200				
9	Tuprana Goojran ...	...	29	6	...	35			
10	Husunpoor ...	2	21	2	...	25				
11	Doola Kheree ...	188	398	65	...	651				
12	Sumbhalka ...	22	75	7	...	104				
13	Kirarwa ...	56	106	20	...	184				
14	Khairkee ...	31	182	77	4	294				
15	Khara Bhao ...	35	73	39	...	147				
16	Malsindoe ...	26	158	2	...	186				
17	Nownaglee ...	27	146	13	3	259				
18	Gurhee Meean Bhace Khan ...	...	20	2	...	22			
19	Poor ...	8	14	2	...	24				
20	Rajhur ...	9	83	17	...	109				
Total, Chuk Bhainswal,		746	2,678	682	7	4,113
1	Rahutpoor, Chuk Fakhunpoor ...	35	141	98	...	274	2 1 10	1 6 4½	1 9 1	
1	Imamnuggur	78	70	44	192	2 15 9½	1 8 9	1 8 9	1 4 5½
2	Jhinjhana ...	...	70	71	...	141			
3	Durgahpoor ...	4	120	12	13	149				
4	Ruzaqungur ...	2	40	122	11	175				
5	Hoahungpoor ...	...	15	10	40	94			
Total, Chuk Choundharee ...		6	358	285	102	751
GRAND TOTAL ...		787	3,177	1,065	109	5,138

PERGUNNAH

Statement showing Profits due to the operation

1.	2.	5.				
No.	Name of Mouzah.	REVENUE ON IRRIGATED AREA.				
		Meesun.	Roslec.	Dakur.	Bhoor.	Total.
		Ra. As. P.	Ra. As. P.	Ra. As. P.	Ra. As. P.	Ra. As. P.
1	Ambehta ...	285 0 0	425 0 0	127 15 0	...	837 15 0
2	Bhatoo ...	172 8 0	638 5 0	40 1 0	...	850 14 0
3	Pelka ...	82 8 0	268 2 0	86 5 0	...	436 15 0
4	Peer Khara ...	...	...	4 10 0	...	4 10 9
5	Pindoora ...	22 8 0	21 5 0	1 9 0	...	45 6 0
6	Tana ...	322 8 0	275 12 0	249 12 0	...	848 0 0
7	Tuprana Afghanan ...	30 0 0	239 2 0	111 0 0	...	380 2 0
8	Tuprana Jatan ...	105 0 0	220 14 0	41 10 0	...	367 8 0
9	Tuprana Goojran ...	...	44 3 0	9 4 0	...	53 7 0
10	Hussunpoor ...	7 8 0	32 0 0	3 1 0	...	42 9 0
11	Doola Kheree ...	705 0 0	606 5 0	100 3 0	...	1,411 8 0
12	Sumbhalka ...	82 8 0	113 15 0	10 13 0	...	207 4 0
13	Kirarwa ...	210 0 0	164 9 0	30 13 0	...	405 6 0
14	Khairkee ...	116 4 0	277 4 0	118 11 0	3 5 0	515 8 0
15	Khara Bhao ...	181 4 0	111 0 0	60 2 0	...	352 9 0
16	Malaindee ...	97 8 0	240 11 0	3 1 0	...	341 4 0
17	Nownaglee ...	363 12 0	222 7 0	20 1 0	2 7 0	608 11 0
18	Gurhee Meera Bhaee Khan ...	...	30 8 0	3 1 0	...	33 9 0
19	Poor ...	30 0 0	21 5 0	3 1 0	...	54 6 0
20	Rajbur ...	33 12 0	126 0 0	26 0 0	...	185 12 0
Total, Chuk Bhainswal		2,797 8 0	4,078 14 0	1,051 1 0	5 12 0	7,933 3 0
1	Rahutpoor, Chuk Fakhunpoor ...	73 15 0	197 4 0	153 11 0	...	424 14 0
1	Imamnuggur ...	...	119 11 0	107 7 0	56 3 0	283 5 0
2	Jhinjhana ...	...	107 7 0	108 15 0	...	216 6 0
3	Durgahpoor ...	11 15 0	184 2 0	18 7 0	16 10 0	231 2 0
4	Ruzaqnuggur ...	6 0 0	61 6 0	187 4 0	14 1 0	268 11 0
5	Hoshungpoor ...	...	76 12 0	15 6 0	43 7 0	135 9 0
Total, Chuk Choundharee		17 15 0	549 6 0	437 7 0	130 5 0	1,135 1 0
GRAND TOTAL		2,889 6 0	4,825 8 0	1,642 3 0	136 1 0	9,493 12 0

JHINJHANA.

of the Eastern Jumna Canal.—(Continued.)

6.				7.				
REVENUE RATE PER UNIRRIGATED ACRE.				REVENUE ON UNIRRIGATED AREA.				
Meesun.	Roslee.	Dakur.	Bhoor.	Meesun.	Roslee.	Dakur.	Bhoor.	Total.
Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
1 0 6½	1 0 6½	0 15 9	0 10 2½	78 9 0	288 7 0	81 11 0	...	448 11 0
				47 9 0	433 3 0	25 10 0	...	506 6 0
				22 12 0	181 15 0	55 2 0	...	259 13 0
				...	...	2 15 0	...	2 15 0
				6 3 0	14 8 0	1 0 0	...	21 11 0
				88 15 0	187 2 0	159 8 0	...	435 9 0
				8 4 0	162 5 0	70 14 0	...	241 7 0
				28 15 0	144 15 0	26 9 0	...	205 0 0
				...	30 0 0	5 15 0	...	35 15 0
				2 1 0	21 11 0	2 0 0	...	25 12 0
				194 6 0	411 7 0	64 0 0	...	669 13 0
				22 12 0	77 9 0	6 14 0	...	107 3 0
				57 14 0	111 11 0	19 11 0	...	189 4 0
				32 1 0	188 3 0	75 13 0	2 9 0	298 10 0
				36 3 0	75 7 0	38 6 0	...	150 0 0
				26 14 0	163 6 0	2 0 0	...	192 4 0
				100 5 0	150 15 0	12 13 0	1 15 0	266 0 0
				...	20 11 0	2 0 0	...	22 11 0
				8 4 0	14 8 0	2 0 0	...	24 12 0
				9 5 0	85 13 0	16 12 0	...	111 14 0
...	...	...	...	771 4 0	2,768 12 0	671 9 0	4 8 0	4,216 1 0
1 2 2½	1 2 2½	1 7 7½	...	39 13 0	160 4 0	144 11 0	...	344 12 0
1 1 0	1 1 0	1 6 8½	{ 0 12 5½ and 2 ch.	...	82 14 0	99 6 0	34 5 0	216 9 0
				...	74 6 0	100 13 0	...	175 3 0
				4 4 0	127 8 0	17 1 0	10 2 0	158 15 0
				2 2 0	42 8 0	173 4 0	8 9 0	226 7 0
...	...	...	...	...	53 2 0	14 3 0	26 8 0	93 13 0
...	...	...	...	6 6 0	380 6 0	404 11 0	79 8 0	870 15 0
...	...	...	...	817 7 0	3,309 6 0	1,320 15 0	84 0 0	5,431 12 0

PERGUNNAH.

Statement showing Profits due to the operation

1.	2.	8.	9.	10.				
No.	Name of Mouzah.	Difference of Revenue between irrigated and unirrigated rates.	Number of wells closed by canal.	TWENTY-TWO ACRES ALLOWED TO EACH WELL.				
				Meesun.	Roalee.	Dakur.	Bhoor.	Total.
		Rs. As. P.						
1	Ambehta ...	389 4 0	2	8	28	8	...	44
2	Bhatoo ...	344 8 0	1	2	19	1	...	22
3	Peika ...	177 2 0	...	...	...	...	...	...
4	Peer Khara ...	1 11 0	...	...	...	...	...	...
5	Pindoora ...	23 11 0	...	...	...	...	...	...
6	Tana ...	412 7 0	...	...	...	...	...	...
7	Tuprana Afghanan ...	138 11 0	...	...	...	...	...	...
8	Tuprana Jatan ...	162 1 0	...	...	...	...	...	...
9	Tuprana Goojran ...	17 8 0	...	...	...	...	...	...
10	Hussunpoor ...	16 13 0	...	...	...	...	...	...
11	Doola Kherce ...	741 11 0	3	19	40	7	...	66
12	Sumbhalka ...	100 1 0	...	...	...	...	...	...
13	Kirarwa ...	216 2 0	1	7	13	2	...	22
14	Khairkee ...	216 14 0	2	5	27	11	1	44
15	Khara Bhaco ...	152 9 0	1	5	11	6	...	22
16	Malaidee ...	149 0 0	...	...	...	...	...	...
17	Nownaglee ...	342 11 0	1	8	13	1	...	22
18	Gurhee Meean Bhace Khan, ...	10 14 0	...	...	...	...	...	...
19	Poor ...	29 10 0	...	...	...	...	...	...
20	Rajhur ...	73 14 0	...	...	...	...	...	...
	Total, Chuk Bhainswal ...	3,717 2 0	11	54	151	36	1	242
1	Rahutpoor, Chuk Fukhunpoor ...	80 2 0	...	...	...	...	...	...
1	Imamnuggur ...	66 12 0	2	...	18	16	10	44
2	Jhinjhana ...	41 3 0	2	...	22	22	...	44
3	Durgahpoor ...	72 3 0	2	1	35	4	4	44
4	Rusaqnuggur ...	42 4 0	6	1	31	92	8	132
5	Hoshungpoor ...	41 12 0	...	...	...	...	...	...
	Total, Chuk Choundhasee ...	264 2 0	12	2	106	134	22	264
	GRAND TOTAL ...	4,061 6 0	23	56	257	170	23	506

JHINJHANA.

f St

of the Eastern Jumna Canal.—(Continued.)

11.					12.				
REVENUE DERIVABLE FROM WELL IRRIGATION.					REVENUE ON WELL-IRRIGATED AREA BY DRY RATES.				
Meesun.	Roslee.	Dakur.	Bhoor.	Total.	Meesun.	Roslee.	Dakur.	Bhoor.	Total.
Ra. As. P.	Ra. As. P.	Ra. As. P.	Ra. As. P.	Ra. As. P.	Ra. As. P.	Ra. As. P.	Ra. As. P.	Ra. As. P.	Ra. As. P.
30 0 0	42 11 0	12 5 0	...	85 0 0	8 4 0	28 15 0	7 14 0	...	45 1 0
7 8 0	28 15 0	1 7 0	...	38 0 0	2 1 0	19 10 0	1 0 0	...	22 11 0
...
...
...
...
...
...
...
71 4 0	60 15 0	10 13 0	...	143 0 0	19 10 0	41 6 0	6 14 0	...	67 14 0
...
26 4 0	19 13 0	3 1 0	...	49 2 0	7 4 0	13 7 0	2 0 0	...	22 11 0
18 12 0	41 2 0	16 15 0	0 13 0	77 10 0	5 3 0	27 15 0	10 13 0	0 10 0	44 9 0
18 12 0	16 12 0	9 4 0	...	44 12 0	5 3 0	11 6 0	5 14 0	...	22 7 0
...
30 0 0	19 13 0	1 9 0	...	51 6 0	8 4 0	13 7 0	1 0 0	...	22 11 0
...
...
...
202 8 0	230 1 0	55 8 0	0 13 0	488 14 0	55 13 0	156 2 0	35 7 0	0 10 0	248 0 0
...
...
...	27 10 0	24 8 0	12 12 0	64 14 0	...	19 2 0	22 12 0	7 13 0	49 11 0
...	33 13 0	33 13 0	...	67 10 0	...	23 6 0	31 2 0	...	54 8 0
3 0 0	53 11 0	6 2 0	5 2 0	67 15 0	1 1 0	37 3 0	5 11 0	3 2 0	47 1 0
3 0 0	47 9 0	141 3 0	10 4 0	202 0 0	1 1 0	32 15 0	130 10 0	6 4 0	170 14 0
...
6 0 0	162 11 0	205 10 0	28 2 0	402 7 0	2 2 0	112 10 0	190 3 0	17 3 0	322 2 0
208 8 0	392 12 0	361 2 0	28 15 0	991 5 0	57 15 0	268 12 0	225 10 0	17 13 0	570 2 0

Statement showing Profits due to the operation of the Eastern Jumna Canal.—(Concl'd.)

1.	2.	13.	14.	Remarks.
No.	Name of Mouzah.	Difference of Revenue on area irrigated by wells.	Actual profits due to canal.	
		Rs. As. P.	Rs. As. P.	
1	Ambhehta ...	29 15 0	349 0 0	
2	Bhatoo ...	15 5 0	329 0 0	
3	Pelka ...	...	177 0 0	
4	Peer Khera ...	...	2 0 0	
5	Pindoora ...	...	24 0 0	
6	Tana ...	...	412 0 0	
7	Tuprana Afghanan ...	...	139 0 0	
8	Tuprana Jatan ...	...	162 0 0	
9	Tuprana Goojran ...	...	17 0 0	
10	Hussunpoor ...	...	17 0 0	
11	Doola Kheres ...	75 2 0	667 0 0	
12	Sumbhalka ...	...	100 0 0	
13	Kirarwa ...	26 7 0	139 0 0	
14	Khairkee ...	33 1 0	184 0 0	
15	Khera Bhao ...	22 5 0	130 0 0	
16	Malaindee ...	...	149 0 0	
17	Nownaglee ...	28 11 0	314 0 0	
18	Gurhee Meean Bhace Khan ...	...	11 0 0	
19	Poor ...	...	30 0 0	
20	Rajhur ...	...	74 0 0	
	Total, Chuk Bhainswal	240 14 0	3,476 0 0	
1	Rahutpoor, Chuk Fukhunpoor ...	...	80 0 0	
1	Imamnuggur ...	15 3 0	52 0 0	
2	Jhinjhana ...	13 2 0	28 0 0	
3	Durgahpoor ...	20 14 0	51 0 0	
4	Ruzaqnuggur ...	31 2 0	11 0 0	
5	Hoshungpoor ...	...	42 0 0	
	Total, Chuk Choundharee...	80 5 0	184 0 0	
	GRAND TOTAL ...	321 3 0	*3,740 0 0	

* The revised jumma of these canal-irrigated villages is Rs. 31,085. Allowed Rs. 2,767, profits due to canal.

S. N. MARTIN,
Collector.

Abstract of Statement A.

B.

1.	2.	3.	4.	5.	6.	7.	8.
Number.	Pergunnah.	Name of Mouzah.	Area irrigated by canal.	Difference of Revenue between irrigated and unirrigated rates.	Difference of Revenue on area irrigated by wells.	Actual profits due to canal.	Remarks.
1	JHINJHANA.	Ambehta ...	438	389	40	100	This is the abstract of the Statement A., and is as correct as can be made out. First of all there is the canal-irrigated area, and the difference deduced between irrigated and unirrigated revenue rates then we come to the number of wells thrown out of use by the canal,—twenty-two acres comprising the various kinds of soil being allowed for each well, the difference between irrigated and unirrigated rates is computed upon the area irrigated by wells, and this is deducted from the whole difference. The balance gives the net profits due to the canal, and is here shown in column 7.
2		Bhatoo ...	491	344	15	300	
3		Pelka ...	254	177	...	177	
4		Peer Khara ...	3	2	...	...
5		Pindoora ...	21	24	...	...
6		Tana ...	429	412	...	412	
7		Tuprana Afghanan ...	237	139	...	140	
8		Tuprana Jatan ...	200	162	...	161	
9		Tuprana Goojran ...	35	17	...	...
10		Hussunpoor ...	25	17	...	...
11		Doola Kherree ...	651	742	75	275	
12		Sumbhalka ...	104	100	...	100	
13		Kirarwa ...	184	216	27	144	
14		Khairkee ...	294	217	33	200	
15		Khara Bhao ...	147	152	22	130	
16		Malaindee ...	186	149	...	150	
17		Nownaglee ...	259	343	29	200	
18		Gurhee Meean Bhace Khan, ...	22	11	...	...
19		Poor ...	24	30	...	...
20		Rajhur ...	109	74	...	75	
		Total, Chuck Bhainawal ...	4,113	3,717	241	3,476	
1	CHUK CHOUNDHAREE.	Rahutpoor, Chuk Fukhunpoor ...	274	80	...	50	Allowed Rs. 52. No deduction necessary. Allowed Rs. 50. No deduction necessary. Allowed Rs. 51.
1		Imamnuggur ...	192	67	15	52	
2		Jhinjhana ...	141	41	13	28	
3		Durgahpoor ...	149	72	21	51	
4		Ruzaqnuggur ...	175	42	31	11	
5		Hoshungpoor ...	94	42	...	42	
		Total, Chuk Choundharee ...	711	264	80	184	
		GRAND TOTAL ...	5,138	4,061	321	3,740	Allowed Rs. 2,767, profits due to canal.

The above account has been checked and modified under the instruction of the Senior Member, Board of Revenue, Mr. R. Money.

The average depth of water is 16 feet ; kucha wells not known ; the natural capability of each canal-irrigated village has been closely tested.

S. N. MARTIN,
Collector.

PERGUNNAH

Statement showing Profits due to the

1.	2.	3.						
Number.	Name of Mouzah.	AREA IRRIGATED BY CANAL.					REVENUE RATE	
		Meesun.	Roslee.	Dakur.	Bhoor.	Total.	Meesun.	Roslee.
							Rs. As. P.	Rs. As. P.
1	Buralsce ...	469	107	22	1	599	2 11 1½	1 12 1
2	Buralsa ...	31	173	12	2	218		
3	Barh ...	42	111	6	...	159		
4	Bulwa Kheree ...	436	236	39	...	711		
5	Pilkhunee ...	53	143	42	...	238		
6	Tanda ...	94	129	54	6	283		
7	Doodhlee ...	275	210	69	...	554		
8	Ronee Hurjeepoor ...	295	60	79	...	434		
9	Aleepoor ...	88	75	2	...	165		
10	Alumgeerpoor ...	34	97	24	...	155		
11	Giyana Muzra ..	116	317	64	3	500		
12	Mungunpoor ...	74	119	15	...	208		
13	Hurnaikce ...	64	45	82	...	151		
	Total, Chak Keworee ...	2,071	1,822	510	12	4,415
1	Akburgurh ...	1	26	27	2 4 4½	1 9 5½
2	Bhumbela ...	24	...	...	...	24
3	Peepulsan ...	...	30	...	...	30
4	Kanerharee ...	32	131	63	...	226		
5	Goonyajooddee ...	10	19	3	...	32		
6	Niamoon ...	9	79	...	23	111		
	Total, Chuk Jukhwala ...	76	285	66	23	450
	GRAND TOTAL ...	2,147	2,107	576	35	4,865

CHURTHAWUL.

operation of the Eastern Jumna Canal.

4.		5.				
PER IRRIGATED ACRE.		REVENUE ON IRRIGATED AREA.				
Dakur.	Bhoor.	Mecsun.	Roslee.	Dakur.	Bhoor.	Total.
Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
		1,264 2 0	187 13 0	31 15 0	0 12 0	1,484 10 0
		83 9 0	303 10 0	17 7 0	1 8 0	406 2 0
		113 3 0	194 13 0	8 11 0	...	316 11 0
		1,175 2 0	414 2 0	56 10 0	...	1,645 14 0
		142 13 0	250 15 0	61 0 0	...	454 12 0
		253 5 0	226 6 0	78 7 0	4 9 0	562 11 0
1 7 2½	0 12 2½	741 4 0	368 8 0	100 3 0	...	1,209 15 0
		795 2 0	105 5 0	114 12 0	...	1,015 3 0
		237 3 0	131 10 0	2 14 0	...	371 11 0
		91 10 0	170 4 0	34 14 0	...	296 12 0
		312 11 0	556 5 0	92 15 0	2 5 0	964 4 0
		199 7 0	208 14 0	21 12 0	...	430 1 0
		172 7 0	79 0 0	119 1 0	...	370 9 0
...	...	5,581 15 0	3,197 9 0	740 9 0	9 2 0	9,529 3 0
		2 4 0	41 6 0	...	...	43 10 0
		54 5 0	...	...	...	54 5 0
		...	47 12 0	...	...	47 12 0
1 1 0	1 5 2	72 7 0	208 8 0	69 5 0	...	350 4 0
		22 10 0	30 4 0	3 5 0	...	56 3 0
		20 6 0	125 12 0	...	30 7 0	176 9 0
...	...	172 0 0	453 10 0	72 10 0	30 7 0	728 11 0
...	...	5,753 15 0	3,651 3 0	813 3 0	39 9 0	10,257 14 0

PERGUNNAH

Statement showing Profits due to the operation

1.	2.	6.					
Number.	Name of Mouzah.	REVENUE RATE PER UNIRRIGATED ACRE.				REVENUE	
		Meesun.	Roslee.	Dakur.	Bhoor.	Meesun.	Roslee.
		Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
1	Buralsee ...					588 2 0	134 3 0
2	Buralaa ...					38 14 0	216 15 0
3	Barh ...					52 11 0	139 3 0
4	Bulwa Kheree ...					546 11 0	295 15 0
5	Pilkhunee ...					66 7 0	179 5 0
6	Tanda ...					117 14 0	161 12 0
7	Doodhlee ...	1 4 0½	1 4 0½	1 1 8½	0 11 6	344 13 0	263 5 0
8	Ronee Hurjeepoor ...					369 14 0	75 4 0
9	Alcepoor ...					110 6 0	94 1 0
10	Alumgeerpoor ...					42 10 0	121 10 0
11	Giyana Muzra ...					145 7 0	397 8 0
12	Mungunpoor ...					92 13 0	149 4 0
13	Hurnaikee ...					80 4 0	56 7 0
	Total, Chuk Keaoree ...	...	...	...	...	2,596 14 0	2,284 12 0
1	Akburgurh ...					1 1 0	28 1 0
2	Bhumbela ...					25 14 0	...
3	Peepulsa ...					...	32 6 0
4	Kanerharce ...	1 1 3	1 1 3	0 14 4½	0 13 6	34 8 0	141 4 0
5	Goonyajooddee ...					10 13 0	20 8 0
6	Niamoon ...					9 11 0	85 3 0
	Total, Chuk Jukhwala ...	...	...	...	...	81 15 0	107 6 0
	GRAND TOTAL ...	...	...	...	...	2,678 13 0	2,592 2 0

CHURTHAWUL.

of the Eastern Jumna Canal.—(Continued.)

7.			8.	9.	10.				
ON UNIRRIGATED AREA.			Difference of Revenue between irrigated and unirrigated rates.	Number of wells closed by Canal.	TWENTY-TWO ACRES ALLOWED TO EACH WELL.				
Dakur.	Bhoor.	Total.			Meesun.	Roslee.	Dakur.	Bhoor.	Total.
Ra. As. P.	Ra. As. P.	Ra. As. P.	Ra. As. P.						
23 13 0	0 11 0	746 13 0	737 13 0	12	207	47	10	...	264
13 0 0	1 7 0	270 4 0	135 14 0	1	3	18	1	...	22
6 8 0	...	198 6 0	118 5 0	...	...	...	...	...	...
42 3 0	...	884 13 0	761 1 0	...	...	...	...	...	...
45 7 0	...	291 3 0	163 9 0	4	20	53	15	...	88
58 7 0	4 5 0	342 6 0	220 5 0	1	8	10	4	...	22
74 10 0	...	682 12 0	527 3 0	1	11	8	3	...	22
85 8 0	...	530 10 0	484 9 0	4	60	12	16	...	88
2 3 0	...	206 10 0	165 1 0	...	...	...	...	...	...
26 0 0	...	190 4 0	106 8 0	...	...	...	...	...	...
69 4 0	2 3 0	614 6 0	349 14 0	2	10	28	6	...	44
16 4 0	...	258 5 0	171 12 0	1	8	12	2	...	22
88 12 0	...	225 7 0	145 2 0	...	...	...	...	...	...
551 15 0	8 10 0	5,442 3 0	4,087 0 0	26	327	188	57	...	572
...	...	29 2 0	14 8 0	1	1	21	...	...	22
...	...	25 14 0	28 7 0	...	...	...	...	...	...
...	...	32 6 0	15 6 0	...	...	...	...	...	...
56 11 0	...	232 7 0	117 13 0	6	19	76	37	...	132
2 11 0	...	34 0 0	22 8 0	1	7	13	2	...	22
...	19 7 0	114 5 0	62 4 0	...	...	...	...	...	...
59 6 0	19 7 0	468 2 0	260 9 0	8	27	110	39	...	176
611 5 0	28 1 0	5,910 5 0	4,347 9 0	34	354	298	96	...	748

PERGUNNAH

Statement showing Profits due to the operation

1.	2.	11.				
Number.	Name of Mouzah.	REVENUE DERIVABLE FROM WELL IRRIGATION.				
		Meesun.	Roslee.	Dakur.	Bhoor.	Total.
		Rs As. P.	Rs As. P.	Rs As. P.	Rs As. P.	Rs As. P.
1	Buralsce ...	557 15 0	82 8 0	14 8 0	...	654 15 0
2	Buralsa ...	8 1 0	31 9 0	1 7 0	...	41 1 0
3	Barh ...	...	...	...	...	...
4	Bulwa Kherce ...	...	...	...	...	...
5	Pilkhunee ...	53 15 0	93 0 0	21 13 0	...	168 12 0
6	Tanda ...	21 9 0	17 9 0	5 13 0	...	44 15 0
7	Doodhlee ...	29 10 0	14 1 0	4 6 0	...	48 1 0
8	Ronee Hurjeepoor ...	161 12 0	21 1 0	23 4 0	...	206 1 0
9	Aleepoor ...	...	...	...	...	...
10	Alumgeerpoor ...	...	...	...	...	...
11	Giyana Muzra ...	26 15 0	49 2 0	8 11 0	...	84 12 0
12	Mungunpoor ...	21 9 0	21 1 0	2 14 0	...	45 8 0
13	Hurnaikee ...	...	...	...	...	...
	Total, Chuk Keaorce ...	881 6 0	329 15 0	82 12 0	...	1,394 1 0
1	Akburgurh ...	2 4 0	33 7 0	...	...	35 11 0
2	Bhumbela ...	...	...	...	...	...
3	Peepulsan ...	...	...	...	...	...
4	Kanerharce ...	43 0 0	121 0 0	40 12 0	...	204 12 0
5	Goonyajooddee ...	15 14 0	20 11 0	2 3 0	...	38 12 0
6	Niamoon ...	...	...	...	...	...
	Total, Chuk Jukhwala ...	61 2 0	175 2 0	42 15 0	...	279 3 0
	GRAND TOTAL ...	942 8 0	505 1 0	125 11 0	...	1,573 4 0

CHURTHAWUL.

of the Eastern Jumna Canal.—(Concluded.)

12.					13.	14.	15.
REVENUE ON WELL IRRIGATED AREA BY DRY RATES.							
Meesun.	Roslee.	Dakur.	Bhoor.	Total.	Difference of Revenue on area irrigated by wells.	Actual profits due to Canal.	Remarks.
Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	
259 9 0	58 15 0	10 13 0	...	329 5 0	325 10 0	412 3 0	
3 12 0	22 9 0	1 1 0	...	27 6 0	13 11 0	122 3 0	
...	...	...	...	...	...	118 5 0	
...	...	...	...	...	...	761 1 0	
25 1 0	66 7 0	16 4 0	...	107 12 0	61 0 0	102 9 0	
10 1 0	12 9 0	4 5 0	...	26 15 0	18 0 0	202 5 0	
13 13 0	10 1 0	3 4 0	...	27 2 0	20 15 0	506 4 0	
75 4 0	15 1 0	17 5 0	...	107 10 0	98 7 0	386 2 0	
...	...	...	...	...	...	165 1 0	
...	...	...	...	...	...	106 8 0	
12 9 0	35 2 0	6 8 0	...	54 3 0	30 9 0	319 5 0	
10 1 0	15 1 0	2 3 0	...	27 5 0	18 3 0	153 9 0	
...	...	...	...	...	...	145 2 0	
410 2 0	235 13 0	61 11 0	...	707 10 0	586 7 0	3,500 9 0	
1 1 0	22 10 0	...	...	23 11 0	12 0 0	2 8 0	
...	...	...	...	...	...	28 7 0	
...	...	...	...	...	...	15 6 0	
30 8 0	81 15 0	33 4 0	...	135 11 0	69 1 0	48 12 0	
7 9 0	14 0 0	1 13 0	...	23 6 0	15 6 0	6 13 0	
...	...	...	...	...	...	62 4 0	
29 2 0	118 9 0	35 1 0	...	182 12 0	96 7 0	164 2 0	
439 4 0	354 6 0	96 12 0	...	890 6 0	682 14 0	3,664 11 0	{ Allowed of this, Rs. 1,850.

S. N. MARTIN,
Collector.

Abstract of Statement A.

B.

1.	2.	3.	4.	5.	6.	7.	8.
Number.	Pergunnah.	Name of Mouzah.	Area irrigated by Canal.	Difference of Revenue between irrigated and un-irrigated ratas.	Difference of Revenue on area irrigated by wells.	Actual profits due to Canal.	Remarks.
1	CHURTHAWUL.	Buralsee ...	599	Rs. 738	Rs. 326	Rs. 412	A deduction of Rs 300 might be allowed for an assessment independent of canal.
2		Buralsa ...	218	136	14	122	Revised demand not at full; half assets; Rs 50 allowed.
3		Barh ...	159	118	...	118	Kutchu wells can be dug; jumma not full; half assets, Rs 80 allowed.
4		Bulwa Kheree ...	711	761	...	761	Rs 250 only allowed as initial jumma, was not full; half assets.
5		Pilkhunee ...	238	164	61	103	Rs 100 allowed.
6		Tanda ...	283	220	18	202	Rs 200 ditto.
7		Doodhlee ...	554	527	21	506	Rs 200 allowed; initial jumma not at full; half assets.
8		Ronec Hurjeepoor ...	434	484	98	386	Rs. 150 allowed, having regard to the circumstances of estate.
9		Alecpoor ...	165	165	...	165	Rs. 50 allowed, revised jumma being below half assets.
10		Alumgeerpoor ...	155	107	...	107	Ditto.
11		Giyana Muzra ...	500	350	31	319	Ditto.
12		Mungunpoor ...	208	172	18	154	Rs. 100 allowed.
13		Hurnaikee ...	191	145	...	145	Rs. 150 ditto.
		Total, Chuk Keaoree ...	4,415	4,087	587	3,500	
1		Akburgurh ...	27	15	12	...	No deduction necessary; the canal irrigation trifling.
2		Bhumbela ...	24	28	...	...	Ditto.
3		Peepulsaan ...	30	15	...	...	Ditto.
4		Kanerharee ...	226	118	69	49	Rs. 60 allowed.
5		Goonyajooddee ...	32	22	15	...	No deduction; irrigation insignificant.
6		Niamoon ...	111	62	...	62	Rs. 60 allowed.
		Total, Chuk Jukhwala ...	450	260	96	164	
		GRAND TOTAL ...	4,865	4,347	683	3,664	{ Allowed in all as deduction on account of Canal, Rs. 1,850.

The average depth of water in this pergunnah is 21 feet; kutchu wells are unknown. Were it practicable to make them, I conclude there would have been some visible outward sign of their existence.

S. N. MARTIN,

Collector.

PERGUNNAH KYRANAH

Statement showing Profits due to the operation of the Eastern Jumna Canal.

1.	2.	3.				
Number.	Name of Mouzah.	AREA IRRIGATED BY CANAL.				
		Meesun.	Roslee.	Dakur.	Bhoor.	Total.
1	Oonchagaon ...	30	613	20	...	663
2	Burala ...	31	194	93	...	318
3	Bhoora, Pnttee Hindooan ...	19	392	9	3	423
4	Ditto, Pnttee Mosulmanan ...	29	433	8	7	477
5	Paotee ...	75	158	15	...	248
6	Titurwara ...	3	666	5	...	674
7	Jugunpoor ...	4	79	12	...	95
8	Kyranah, Turf Durmayan ...	7	299	44	...	350
9	Ditto, Turf Sadhoo ...	52	418	79	...	549
10	Ditto, Turf Qasim ...	11	301	79	...	391
11	Ditto, Turf Qanoongoan ...	35	417	69	...	521
12	Kishorepoor ...	39	340	24	...	403
13	Kookurharee ...	...	4	...	...	4
14	Kharee Kufah Dooz ...	14	56	40	8	118
15	Gogwan ...	16	590	131	1	738
16	Laloopoora ...	...	24	...	...	24
17	Kyranah, Mehal Musbootta ...	16	245	18	...	279
Total, Chuk Kyranah ...		381	5,229	646	19	6,275
1	Puhar Muzra ...	...	18	5	6	29
2	Gundraoon ...	...	...	40	...	40
Total, Chuk Rana Muzra ...		...	18	45	6	69
1	Boocha Kharee ...	...	69	3	...	72
2	Kyranah, Turf Khoord ...	...	26	2	...	28
Total, Chuk Punjeeth ...		...	95	5	...	100
1	Airtee ...	88	284	51	...	423
2	Boodhopoora ...	9	99	3	...	111
3	Beenra ...	51	230	40	...	321
4	Chuk Aleepoor Titurwara ...	...	9	...	...	9
5	Ditto ditto Kyranah ...	...	4	...	...	4
6	Aleepoor ...	159	161	72	...	392
7	Kundaila ...	4	74	50	13	141
8	Hingoo Kharee Mehal, 13½ biswahs ...	...	4	...	...	4
9	Ditto ditto, 6½ biswahs ...	...	4	...	...	4
Total, Chuk Shamlee ...		311	869	216	13	1,409
GRAND TOTAL ...		692	6,211	912	38	7,853

PERGUNNAH

Statement showing Profits due to the operation

1.	2.	4.			
Number.	Name of Mouzah.	REVENUE RATE PER IRRIGATED ACRE.			
		Meesun.	Roslee.	Dakur.	Bhoor.
		Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
1	Oonchagaon ...	3 0 0	2 0 0	1 4 2	0 15 6
2	Burala ...				
3	Bhoora, Puttee Hindooan ...				
4	Ditto, Puttee Mosulmanan ...				
5	Paotee ...				
6	Titurwara ...				
7	Juggunpoor ...				
8	Kyranah, Turf Durmayan ...				
9	Ditto, Turf Sadhoo ...				
10	Ditto, Turf Qasim ...				
11	Ditto, Turf Qanoongoan ...				
12	Kishorepoor ...				
13	Kookurharee ...				
14	Kharee Kufsh Dooz ...				
15	Gogwan ...				
16	Laloopoora ...				
17	Kyranah, Mehal Muzboota ...				
	Total, Chuk Kyranah
1	Puhar Muzra ...	2 12 10	1 8 3½	1 4 2	0 15 6
2	Gundraoon ...				
	Total, Chuk Rana Muzra
1	Boocha Kharee ...	3 10 0	2 6 0	1 10 2	0 15 6
2	Kyranah, Turf Khoord ...				
	Total, Chuk Punjeeth
1	Airtee ...	3 9 6	3 0 0	1 14 11½	1 0 3½
2	Boodhopoora ...				
3	Beenra ...				
4	Chuk Aleepoor Titurwara ...				
5	Ditto ditto Kyranah ...				
6	Aleepoor ...				
7	Kundaila ...				
8	Hingoo Kharee Mehal, 13½ biswahs				
9	Ditto ditto, 6½ biswahs				
	Total, Chuk Shamlee
	GRAND TOTAL

KYRANAH.

of the Eastern Jumna Canal.—(Continued.)

5.

REVENUE ON IRRIGATED AREA.

Meesun.	Roslee.	Dakur.	Bhoor.	Total.
Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
90 0 0	1,226 0 0	25 3 0	...	1,341 3 0
93 0 0	388 0 0	117 4 0	...	598 4 0
57 0 0	784 0 0	11 6 0	2 15 0	855 5 0
87 0 0	866 0 0	10 1 0	6 12 0	969 13 0
225 0 0	316 0 0	18 14 0	...	559 14 0
9 0 0	1,332 0 0	6 5 0	...	1,347 5 0
12 0 0	158 0 0	15 2 0	...	185 2 0
21 0 0	598 0 0	55 7 0	...	674 7 0
156 0 0	836 0 0	99 9 0	...	1,091 9 0
33 0 0	602 0 0	99 9 0	...	734 9 0
105 0 0	834 0 0	87 0 0	...	1,026 0 0
117 0 0	680 0 0	30 4 0	...	827 4 0
...	8 0 0	...	...	8 0 0
42 0 0	112 0 0	50 7 0	7 12 0	212 3 0
48 0 0	1,160 0 0	165 2 0	1 0 0	1,394 2 0
...	48 0 0	...	...	48 0 0
48 0 0	490 0 0	22 11 0	...	560 11 0
1,143 0 0	10,458 0 0	814 4 0	18 7 0	12,433 11 0
{ ...	27 5 0	6 5 0	5 13 0	39 7 0
{ ...	...	50 7 0	...	50 7 0
...	27 5 0	56 12 0	5 13 0	89 14 0
{ ...	163 14 0	4 14 0	...	168 12 0
{ ...	61 12 0	3 4 0	...	65 0 0
...	225 10 0	8 2 0	...	233 12 0
{ 316 4 0	852 0 0	98 12 0	...	1,267 0 0
{ 32 6 0	297 0 0	5 13 0	...	335 3 0
{ 183 5 0	690 0 0	77 7 0	...	950 12 0
{ ...	27 0 0	...	...	27 0 0
{ ...	12 0 0	...	...	12 0 0
{ 571 7 0	483 0 0	139 6 0	...	1,193 13 0
{ 14 6 0	222 0 0	96 13 0	13 4 0	346 7 0
{ ...	12 0 0	...	...	12 0 0
{ ...	12 0 0	...	...	12 0 0
1,117 12 0	2,607 0 0	418 3 0	13 4 0	4,156 3 0
2,260 12 0	13,317 15 0	1,297 5 0	37 8 0	16,913 8 0

PERGUNNAH

Statement showing Profits due to the operation

1. Number.	2. Name of Mouzah.	6. REVENUE RATE PER UNIRRIGATED ACRE.				REVENUE ON	
		Meesun.	Roslee.	Dakur.	Bhoor.	Meesun.	Roslee.
		Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
1	Oonchagaon ...					41 4 0	842 14 0
2	Burala ...					42 10 0	266 12 0
3	Bhoora, Puttee Hindoan...					26 2 0	539 0 0
4	Ditto, Puttee Mosulmanan,					39 14 0	595 6 0
5	Paotee ...					103 2 0	217 4 0
6	Titurwara ...					4 2 0	615 12 0
7	Jugunpoor ...					5 8 0	108 10 0
8	Kyranah, Turf Durmayan...					9 10 0	411 2 0
9	Ditto, Turf Sadhoo ...	1 6 0	1 6 0	1 0 2	0 14 11	71 8 0	574 12 0
10	Ditto, Turf Qasim ...					15 2 0	413 14 0
11	Ditto, Turf Qanoongoan					48 2 0	573 6 0
12	Kishorepoor ...					53 10 0	467 8 0
13	Kookurharee ...					...	5 8 0
14	Kharee Kufah Dooz ...					19 4 0	77 0 0
15	Gogwan ...					22 0 0	811 4 0
16	Laloopora ...					...	33 0 0
17	Kyranah, Mehal Muzboota,					22 0 0	336 14 0
	Total, Chuk Kyranah ...	...	...	...	...	523 14 0	7,189 14 0
1	Puhar Muzra ...	1 5 8½	1 5 8½	1 0 2	0 8 0	...	24 6 0
2	Gundraoon ...					...	...
	Total, Chuk Rana Muzra ...	...	...	...	...	...	24 6 0
1	Boocha Kharee ...	1 14 0	1 14 0	1 1 0	...	...	129 6 0
2	Kyranah, Turf Khoord ...					...	48 12 0
	Total, Chuk Punjeeth ...	...	...	...	...	...	178 2 0
1	Airtee ...					182 7 0	588 11 0
2	Boodhopoora ...					18 11 0	205 4 0
3	Beenra ...					105 12 0	476 12 0
4	Chuk Aleepoor Titurwara,					...	18 11 0
5	Ditto ditto Kyranah...					...	8 5 0
6	Aleepoor ...	2 1 2	2 1 2	1 7 1	0 12 0	329 10 0	333 12 0
7	Kundaila ...					8 5 0	153 6 0
8	Hingoo Kharee Mehal, 13½					...	8 4 0
	biswahs ...					...	...
9	Ditto ditto, 6½					...	8 5 0
	biswahs ...					...	...
	Total, Chuk Shamlee ...	...	...	...	...	644 13 0	1,801 6 0
	GRAND TOTAL ...	...	...	...	...	1,168 11 0	9,193 12 0

KYRANAH.

of the Eastern Jumna Canal.—(Continued.)

7.			8.	9.	10.				
UNIRRIGATED AREA.			Difference of Revenue between irrigated and unirrigated rates.	Number of wells closed by Canal.	TWENTY-TWO ACRES ALLOWED TO EACH WELL.				
Dakur.	Bhoor.	Total.			Meesun.	Roslee.	Dakur.	Bhoor.	Total.
Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.						
20 3 0	...	904 5 0	436 14 0	...	...	...	...	...	...
94 0 0	...	403 6 0	194 14 0	...	...	...	...	...	...
9 2 0	2 13 0	577 1 0	278 4 0	4	4	82	2	...	88
8 1 0	6 8 0	649 13 0	320 0 0	16	27	399	7	7	440
15 3 0	...	335 9 0	224 5 0	7	53	113	10	...	176
5 1 0	...	624 15 0	422 6 0	...	...	...	...	...	...
12 2 0	...	126 4 0	58 14 0	...	...	...	...	...	...
44 7 0	...	465 3 0	209 4 0	12	5	226	33	...	264
79 13 0	...	726 1 0	365 8 0	1	2	17	3	...	22
79 13 0	...	508 13 0	225 12 0	5	3	85	22	...	110
69 12 0	...	691 4 0	334 12 0	3	4	53	9	...	66
24 4 0	...	545 6 0	281 14 0	...	...	...	...	...	...
...	...	5 8 0	2 8 0	...	...	...	...	...	...
40 7 0	7 7 0	144 2 0	68 1 0	...	...	...	...	...	...
132 6 0	0 15 0	956 9 0	427 9 0	5	2	88	20	...	110
...	...	33 0 0	15 0 0	...	...	...	...	...	...
18 3 0	...	377 1 0	183 10 0	...	...	...	...	...	...
652 13 0	17 11 0	8,384 4 0	4,049 7 0	53	100	1,063	106	7	1,276
5 1 0	3 0 0	32 7 0	7 0 0	...	...	...	...	...	...
40 7 0	...	40 7 0	10 0 0	...	...	...	...	...	...
45 8 0	3 0 0	72 14 0	17 0 0	...	...	...	...	...	...
3 3 0	...	132 9 0	36 3 0	1	...	21	1	...	22
2 2 0	...	50 14 0	14 2 0	...	...	...	...	...	...
5 5 0	...	183 7 0	50 5 0	1	...	21	1	...	22
73 9 0	...	844 11 0	422 4 0	1	9	30	5	...	44
4 5 0	...	228 4 0	106 15 0	...	...	...	...	...	...
57 11 0	...	640 3 0	310 9 0	...	...	...	...	...	...
...	...	18 11 0	8 5 0	...	...	...	...	...	...
...	...	8 5 0	3 11 0	...	...	...	...	...	...
103 14 0	...	767 4 0	426 9 0	1	18	18	8	...	44
72 2 0	9 12 0	243 9 0	102 14 0	...	...	...	...	...	...
...	...	8 4 0	3 12 0	...	...	...	...	...	...
...	...	8 5 0	3 11 0	...	...	...	...	...	...
311 9 0	9 12 0	2,767 8 0	1,388 11 0	2	27	48	13	...	88
1,015 3 0	30 7 0	11,408 1 0	5,505 7 0	59	127	1,132	120	7	1,386

PERGUNNAH

Statement showing Profits due to the operation

1.	2.	11.				
Number.	Name of Mourah.	REVENUE DERIVABLE FROM WELL IRRIGATION.				
		Meesun.	Roslee.	Dakur.	Bhoor.	Total.
		Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
1	Oonchagaon ...	...	...	...	...	...
2	Burala ...	...	...	...	...	...
3	Bhoora, Puttee Hindooan ...	12 0 0	164 0 0	2 8 0	...	178 8 0
4	Ditto, Puttee Mosulmanan, ...	81 0 0	798 0 0	8 13 0	6 13 0	894 10 0
5	Paotee ...	159 0 0	226 0 0	12 10 0	...	397 10 0
6	Titurwara ...	...	...	...	...	...
7	Jugunpoor ...	...	...	...	...	...
8	Kyranah Turf Durmayan ...	15 0 0	452 0 0	41 10 0	...	508 10 0
9	Ditto, Turf Sadhoo ...	6 0 0	34 0 0	3 13 0	...	43 13 0
10	Ditto, Turf Qasim ...	9 0 0	170 0 0	27 12 0	...	206 12 0
11	Ditto, Turf Qanoongoan ...	12 0 0	106 0 0	11 5 0	...	129 5 0
12	Kiahorepoor ...	...	...	...	...	...
13	Kookurharee ...	...	...	...	...	...
14	Kharee Kufsh Dooz ...	...	...	...	...	...
15	Gogwan ...	6 0 0	176 0 0	25 3 0	...	207 3 0
16	Laloopora ...	...	...	...	...	...
17	Kyranah, Mehal Musbootta, ...	...	...	...	...	...
	Total, Chuk Kyranah ...	300 0 0	2,126 0 0	133 10 0	6 13 0	2,566 7 0
1	Puhar Muzra ...	...	...	...	...	...
2	Gundraoon ...	...	...	...	...	...
	Total, Chuk Rana Muzra ...	...	...	...	...	...
1	Boocha Kharee ...	...	49 14 0	1 10 0	...	51 8 0
2	Kyranah, Turf Khoord ...	...	...	...	...	...
	Total, Chuk Punjeeth ...	...	49 14 0	1 10 0	...	51 8 0
1	Airtee ...	32 6 0	90 0 0	9 11 0	...	132 1 0
2	Boodhopoora ...	...	...	...	...	...
3	Beenra ...	...	...	...	...	...
4	Chuk Aleepoor Titurwara ...	...	...	...	...	...
5	Ditto ditto Kyranah ...	...	...	...	...	...
6	Aleepoor ...	64 11 0	54 0 0	15 8 0	...	134 3 0
7	Kundalla ...	...	...	...	...	...
8	Hingoo Kharee Mehal, 13½ biswahs ...	...	...	...	...	...
9	Ditto ditto Mehal, 6½ biswahs ...	...	...	...	...	...
	Total, Chuk Shamlee ...	97 1 0	144 0 0	25 3 0	...	266 4 0
	GRAND TOTAL ...	397 1 0	2,319 14 0	160 7 0	6 13 0	2,884 3 0

KYRANAH.

of the Eastern Jumna Canal.—(Concluded.)

12.					13.	14.	15.
REVENUE ON WELL IRRIGATED AREA BY DRY RATES.					Difference of Revenue on area irrigated by wells.	Actual profits due to Canal.	Remarks.
Meesun.	Roslee.	Dakur.	Bhoor.	Total.			
Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	
...	436 14 0	Wherever wells have two runs, "dolawa," twice the average area has been allowed; twenty two acres is the average irrigable area from a well with one run only. It will be seen, as I have noted before, that Mr. Colvin considers unirrigated Meesun to be of the same kind as unirrigated Roslee; Meesun becomes especially valuable for the year, manure is applied, and irrigation available—otherwise he thinks there is little distinction between that and Roslee.
...	...	...	...	...	...	194 14 0
5 8 0	112 2 0	2 0 0	...	120 4 0	58 4 0	220 0 0	
37 2 0	548 10 0	7 1 0	6 8 0	599 5 0	295 5 0	24 11 0	
72 14 0	155 6 0	10 2 0	...	238 6 0	159 4 0	65 1 0	
...	...	...	...	...	...	422 6 0
...	...	...	...	...	...	58 14 0
6 14 0	310 12 0	33 6 0	...	351 0 0	157 10 0	51 10 0	
2 12 0	28 6 0	3 0 0	...	29 2 0	14 11 0	350 13 0	
4 2 0	116 14 0	22 4 0	...	143 4 0	63 8 0	162 4 0	
5 8 0	72 14 0	9 2 0	...	87 8 0	41 13 0	292 15 0	
...	...	...	...	...	...	281 14 0
...	...	...	...	...	...	2 8 0
...	...	...	...	...	...	68 1 0
2 12 0	121 0 0	20 3 0	...	143 15 0	63 4 0	364 5 0	
...	...	...	...	...	...	15 0 0
...	...	...	...	...	...	183 10 0
137 8 0	1,461 10 0	107 2 0	6 8 0	1,712 12 0	853 11 0	3,195 12 0	
...	...	...	...	...	...	7 0 0
...	...	...	...	...	...	10 0 0
...	...	...	...	...	...	17 0 0
...	39 6 0	1 1 0	...	40 7 0	11 1 0	25 2 0	
...	...	...	...	...	...	14 2 0
...	39 6 0	1 1 0	...	40 7 0	11 1 0	39 4 0	
18 11 0	62 3 0	7 3 0	...	88 1 0	44 0 0	378 5 0	
...	...	...	...	...	...	106 15 0
...	...	...	...	...	...	310 9 0
...	...	...	...	...	...	8 5 0
...	...	...	...	...	...	3 11 0
37 5 0	37 5 0	11 9 0	...	86 3 0	48 0 0	378 9 0	
...	...	...	...	...	...	102 14 0
...	...	...	...	...	...	3 12 0
...	...	...	...	...	...	3 11 0
56 0 0	99 8 0	18 12 0	...	174 4 0	92 0 0	1,296 11 0	
193 8 0	1,600 8 0	126 15 0	6 8 0	1,927 7 0	956 12 0	4,548 11 0	

Total deduction allowed, Rs. 3,647.
See Abstract.

S. N. MARTIN,
Collector.

Abstract of Statement A.

B.

1.	2.	3.	4.	5.	6.	7.	8.
Number.	Pergunnah.	Name of Mouzah.	Area irrigated by Canal.	Difference of Revenue between irrigated and unirrigated rates.	Difference of Revenue on area irrigated by wells.	Actual profits due to Canal.	Remarks.
1		Oonchagaon ...	663	437	...	437	Allowed Rs. 437.
2		Burala ...	318	195	...	195	Ditto " 195.
3		Bhoora, Puttee Hindooan...	423	278	58	220	Ditto " 220.
4		Ditto Mosulmanan,	477	320	295	25	Ditto " 25.
5		Paotee ...	248	224	159	65	Ditto " 65.
6		Titurwara ...	674	422	...	422	Ditto " 422.
7		Jugunpoor ...	95	59	...	59	Ditto " 59.
8		Kyranah, Turf Durmayan	350	209	158	51	Ditto " 51.
9		Ditto, Turf Sadhoo ...	549	366	15	361	Ditto " 191.
10		Ditto, Turf Qasim ...	391	226	64	162	Ditto " 162.
11		Ditto, Turf Qanoongoan,	521	335	42	293	Ditto " 110.
12		Kishorepoor ...	403	282	...	282	Ditto " 155.
13		Kookurharee ...	4	3	...	3	No deduction necessary.
14		Kharee Kufsh Dooz ...	118	68	...	68	Allowed Rs. 70.
15		Gogwan ...	738	427	63	364	Ditto " 300.
16		Lalooipoora ...	24	15	...	15	No deduction necessary.
17		Kyranah Mehal Muzbootta,	279	184	...	184	Allowed Rs. 185.
		Total, Chuk Kyranah ...	6,275	4,050	854	3,196	
1		Puhar Muzra ...	29	7	...	7	So insignificant, no deduction necessary.
2		Gundraoon ...	40	10	...	10	No deduction necessary.
		Total, Chuk Rana Muzra,	69	17	...	17	
1		Boocha Kharee ...	72	36	11	25	Ditto.
2		Kyranah, Turf Khoord ...	28	14	...	14	Ditto.
		Total, Chuk Punjeeth...	100	50	11	39	
1		Airtee ...	423	422	44	378	Allowed Rs. 300.
2		Boodhopoora ...	111	107	...	107	Ditto " 100.
3		Beenra ...	321	311	...	311	Ditto " 200.
4		Chuk Alipoor Titwara ...	9	8	...	8	No deduction necessary.
5		Ditto ditto Kyranah ...	4	4	...	4	Ditto.
6		Alipoor ...	392	426	48	378	Allowed Rs. 300.
7		Kundaila ...	141	103	...	103	Ditto " 100.
8		Hingoo Kharee Mehal, 13½ biswahs ...	4	4	...	4	No deduction necessary for so small a figure.
9		Ditto ditto, 6½ biswahs ...	4	4	...	4	No deduction necessary.
		Total, Chuk Shamlee...	1,409	1,389	92	1,297	
		GRAND TOTAL ...	7,853	5,506	957	4,549	Total deduction allowed on account of Canal, Rs. 3,647.

Depth of water average 7 feet where kutchra wells, though not at present in existence, are feasible ; a very small deduction has been allowed for Canal profits.

S. N. MARTIN,

Collector.

(2) ✓

SETTLEMENT REPORT

ON THE

GANGES CANAL TRACT

IN THE

MUZAFFARNAGAR DISTRICT.

BY ALAN CADELL, Esquire,

Late Settlement Officer.

ALLAHABAD:

NORTH-WESTERN PROVINCES AND OUDH GOVERNMENT PRESS.

1878.

No. ²¹⁹₁₉₉ of 1881.

FROM

J. S. MACKINTOSH, Esq.,

Secretary to the Board of Revenue, N.-W. P.,

TO

R. SMEATON, Esq.,

Offg. Secretary to Government, N.-W. P. and Oudh.

Dated Allahabad, the 28th April, 1881.

SIR,

DEPARTMENT I.
BOARD OF LAND
REVENUE.

Present :
S. REID, Esq.

Purchapur.
Muzaffarnagar.
Bhukarheri.
Khatauli.
Jansath.
Bhuma Sambhalhera,

I AM desired by the Senior Member to submit, for the orders of the Honorable the Lieutenant-Governor, the final settlement report on the Ganges Canal tract in the Muzaffarnagar district (comprising the parganas named in margin), drawn up by Mr. Alan Cadell, C.S., late Settlement Officer of Muzaffarnagar. Pargana Gurdhanpur, which lies entirely in the Ganges valley, together with the Khadir portions of parganas Purchapur, Bhukarheri and Bhuma Sambhalhera, are not included in the tract reported on.

2. Mr. Cadell's report is dated December, 1878. It has not been officially submitted to the Board up to the present date. A copy of the printed report was received from Mr. Cadell on the 12th April, 1879. The Senior Member is anxious to submit to Government a brief review of the report before he vacates his seat on the Board.

3. The parganas which have been settled by Mr. Cadell form that portion of the district regarding which Sir William Muir, after consultation with Mr. Inglis (Senior Member of the Board), Mr. Fleetwood Williams and Mr. Court (the retiring and incoming Commissioners of Meerut), Mr. Forbes (Collector and Settlement Officer of Meerut), and Mr. Cadell (Settlement Officer of Muzaffarnagar), arrived at the conclusion that the assessment of the six eastern parganas of the district, settled by Mr. Martin, was inadequate; that the inadequacy existed at the time when the assessment was framed, and that consequently there should be a revision of the Government demand, preceded by a testing and correction of the entries of soil and irrigation. His Honor directed that the new assessment should be based on existing assets and should run for the same period as the present settlement (by which must have been meant the settlement of the rest of the district), so as to expire at the same time with it. The khasrahs prepared by the preceding Settlement Officer, which were believed to be correct as regarded area, but to a certain extent incorrect as regarded soil and irrigation, were to be subjected to a careful revision (Government Resolution, Revenue Department, No. 118, dated 25th March, 1870.) The revision of the assessment of the seven parganas was entrusted to Mr. Cadell, who was transferred for that purpose from the Allahabad Settlement. Mr. Cadell has submitted a very full report of his proceedings. The Senior Member regrets that he is compelled to review them in a very summary mode.

4. The tract, settled by Mr. Cadell, may be termed the Ganges and Kali Doab; or the Ganges Canal, tract of the Muzaffarnagar district. It has a length of 34 miles and a varying breadth of from 12 to 26 miles. The area is 569 square miles. Its physical features are fully described in paras. 11—13 of the report. Its chief physical feature is the prevalence of sand, which forbade the use of earthen wells, while the

distance of the water from the surface was so great as to confine irrigation from masonry wells to garden lands. There were no other means of irrigation, there being no jhils in the uplands; only in exceptional cases were ponds used for irrigation. No irrigation was possible from the rivers which ran far below the level of the upland portion of the tract. In such a country canal irrigation could not but effect a vast improvement. The Ganges Canal has fertilized the upland tract, but it has unfortunately, at the same time, deteriorated more or less the lower lands. This evil has been remedied in late years by the abandonment of many of the irrigating channels and by providing permanent means of escape for the surface drainage. The Ganges Canal must also be held answerable for a considerable extension of marsh lands in the valleys of the rivers.

5. The country is well provided with means of communication—with a metalled road, a navigable canal, and lately the Sindh, Punjab, and Delhi Railway running through it. The roads in the interior are in fair order. There are many local markets, the chief of which is the town of Muzaffarnagar, which has risen greatly in importance since the opening of the railway. The population is sufficiently dense on the uplands. The rate per square mile of (a) total area and (b) cultivated and culturable area, ranges from (a) 363 in Bhukarheri to 507 in Khatauli, and (b) from 432 in Bhukarheri to 573 in Khatauli. The agricultural population is estimated at 93,899 and the non-agricultural at 149,518.

6. The Chamars form 17·3 per cent. of the population, Jâts 7·5 per cent., Brahmans 4·3 per cent., Rajputs are put down at 2·64 and Chauhans at 2 per cent. Nearly one-third of the population are Muhammadans, of whom the great bulk consists of the *Nau-Muslim* cultivating tribes, or of the artizan (chiefly Julaha) and menial classes. The best cultivating castes are Jâts, Sânis, Tagas, Jhojhas, Gárahs and Rawas, who contribute 20 per cent. to the total and form more than a moiety of the agricultural population.

7. The ten principal proprietors hold from 2,315 to 24,013 acres of the total area, given in the "statement of ownership by castes." Sayyads hold 124,660 acres, Mahajans 75,342, Jâts (Hindu) 28,873, Marhals 20,075, Tagas (Hindu) 17,772, Gujars (Hindu) 15,189, Sheikhs 15,104, Beorahs 14,901, and Rajputs (Hindu) and converts to Muhammadanism 8,104 acres. No details are given of the castes of cultivators.

Proprietors cultivate 53,735 acres, either *sîr* or *khud kasht*, 1,825 acres as occupancy tenants and 2,093 as tenants at will. Occupancy tenants hold 129,478 acres, and also cultivate 19,959 acres as tenants at will. 57,419 acres are held by mere tenants at will. Mr. Cadell notes that tenants are more harshly treated in revenue free than in revenue paying estates, and that "the most substantial rights on the part of tenants are found in those neighbourhoods in which the Government demand pressed most heavily."

Of the 420 estates in the 6 parganas, 175 are held in *zamdari* tenures, 101 of them being owned by a single sharer, or by single families, and 74 by a number of co-sharers, 38 estates are *pattidari*, and 207 imperfect *pattidari*. In paras. 41-45 Mr. Cadell gives an account of the *Sharah naqdi* tenants and of those holding at owners' rates. The former occupied under Mr. Edward Thornton the position of *zamdars* rather than of tenants, as they had full control over the whole estate (village site, ponds, barren and culturable waste) the proprietors being mere recipients of *Malikana*. They have now been reduced to the position of ordinary occupancy tenants.

8. Mr. Cadell reports that the condition of the people of the Ganges tract is, on the whole, prosperous. Not only has the Ganges Canal insured the land from ordinary droughts, but it has encouraged the growth of the more valuable crops, and especially of sugarcane. Mr. Cadell doubts whether the agricultural community, greatly as they have prospered in late years, is less indebted than it was formerly, as "the increased credit

due to recent agricultural prosperity, has admitted of increased borrowing and has encouraged more than the old recklessness in expenditure." The poorest class, in many respects, consists of the broken down Sayyad families, formerly the most powerful in the country. But increased prosperity has resulted in a lowering of the prevailing rates of interest.

9. The only manufactures are of sugar, blankets, and country cloth. The Muzafarnagar blankets are known and valued far and wide. There is a considerable export of grain to the eastward, and of sugar to the south and west. The export of sugar and of gram is estimated to be about twelve lakhs of maunds, and in equal proportions.

10. The facilities for irrigation afforded by the distributaries of the Ganges Canal have encouraged the cultivation of rice even more than of sugarcane. The latter is generally sown immediately after the land has been cropped for *kharif*. While, formerly, sugarcane was almost invariably grown after *fallow*. Three-fourths now follow immediately on a rain crop. The area under rice has more than doubled. Mr. Cadell considers that "Ramjiwan Munji," an indigenous rice, will hold its own against "Carolina" on the upland, while the latter is better adapted for the Ganges valley, as it can stand flooding better than other varieties. The twice cropped area has also doubled—the result, it cannot be doubted, of the introduction of canal irrigation. It is estimated at 13,824 acres.

11. The *kharif* crops occupy $57\frac{1}{2}$ per cent. of the cultivated area, viz., 163,324 acres, the *rabi* crops $42\frac{1}{2}$ per cent. or 120,172 acres, and garden crops $\frac{1}{4}$ per cent. or 745 acres. The crops most largely grown are:—

	Acres.		Acres.
Wheat	66,999	Wheat with barley	10,877
Bajra	33,882	Munji (fine rice)	10,383
Urd	23,567	Cotton	9,391
Chari	19,364	Gram	8,992
Barley	18,372	Dhan (course rice)	7,236
Sugarcane	16,762	Juar	3,529
Ploughed for sugarcane	4,593	Makai (Indian corn)	2,119
Moth	15,541		

The chief agricultural features of the tract are summed up by Mr. Cadell, as follows:—

- (1).—The unusually large percentage of sugarcane (6) rice (6·5), and wheat (26) notwithstanding the extent of poor soil.
- (2).—The almost complete absence of indigo and arhar, owing to the climate.
- (3).—The smallness of the juar crop ($1\frac{1}{4}$ p. c.) and the consequently considerable area (19 p. c.) devoted to fodder crops.

12. Mr. Cadell has given, in his second chapter, the general and the fiscal history of the tract under report. Want of time forbids the Senior Member's attempting to follow the Settlement Officer through the interesting details which that chapter contains. He proceeds at once to the review of chapter III., which treats of and compares the present and former condition of the tract.

13. In his revision of the Settlement, Mr. Cadell found it unnecessary to prepare new maps, but the correction of the maps of 1862 proved to be a tedious and troublesome task. "In the case of many villages the corrections in red ink almost amounted to a resurvey." Mr. Cadell was compelled, of course, to make new khasrahs and to alter the classification of soils adopted in former settlements (Sir Henry Elliott's in 1835 and Mr. Edward Thornton's in 1841). This change was necessitated by the general substitution of canal for well irrigation. Formerly almost the only land irrigated was the manure land in the immediate vicinity of the village site. The canal distributaries now supply water to the outlying as well as to the homestead lands, and the distribution of the manure follows the distribution of the water. Mr. Cadell has therefore omitted the *misar* land of Mr. Thornton's settlement. His soil classification is as follows:—

- 1 and 2. Wet and dry barah (commonly called in the central and lower Doab gauhan or goind).
- 3 and 4. Wet and dry 1st rausli (loam).
- 5 and 6. Wet and dry 2nd rausli (sandy loam).
7. Dry bhur (sand).

Mr. Cadell has not made a separate class of *wet bhur*, for *bhur* is not ordinarily irrigated until it is so improved by careful cultivation that it may fairly be classed as 2nd *rausli*. Mr. Cadell's 1st *rausli* appears to partake of the character of both *matiyar* (clay) and 1st class *dumat* (loam), while his 2nd *rausli* is identical with 2nd class *dumat* (loam and sand). Mr. Cadell rightly excluded from his irrigated soils land watered only in seasons of extraordinary emergency. "It is owing," Mr. Cadell writes, "to the exclusion of such exceptional irrigation from the area entered irrigated and to the circumstance that in his new *khasra* the records of irrigation in past years, rather than a vague expectation of rapid increase in future, have guided the entry of irrigated land, that, more especially in the sandier *parganas*, the new soil statements show a falling off instead of a rapid increase in the irrigated area, notwithstanding the continual progress which canal irrigation has made during the last ten years."

14. Comparing the area returns of 1841 (Mr. Thornton's settlement) and of Mr. Cadell's revision, there is an increase of 5,211 acres in the total area, of 890 acres in groves, and of 42,574 acres, in the cultivated area; under each of the other heads, assessable and non-assessable, there is a decrease amounting in the aggregate to 347,363 acres. The cultivation has extended since 1863 from 249,966 to 263,997, or by 14,031 acres. The irrigated area at the last settlement amounted only to 21,633 acres. By 1863 it had risen to 119,440, and now stands (or rather stood at the time of Mr. Cadell's enquiries) at 122,632 acres. No soil details are available for the last settlement. The proportions now contributed by the several soils are—

Barah 652 acres, of which only 66 are canal irrigated, while 586 acres are watered from wells and other sources.

	Canal.	Well.	Other sources.
1st Rausli	91,227	7,185	790
2nd Rausli	22,401	273	174

The dry soil areas are as follows :—

Barah	4 acres.
1st Rausli	27,671 "
2nd Rausli	37,815 "
Bhur	75,875 "

The total wet and dry areas are 122,632 and 141,365 acres. Excluding *bhur*, 65 per cent. of the cultivated area of the better soils is watered.

15. In para. 19 of Chapter III., Mr. Cadell has given his own and Mr. Martin's soil areas. Mr. Cadell's returns are far more favourable for the people. Under Barah and 1st *rausli* (equivalent to Mr. Martin's *misan*, 1st *rausli* and *dakar*) there is a decrease of 63,294 acres, while the increase in the 2nd *rausli* and *bhur* lands is 77,325. But Mr. Cadell has pointed out that the soil entries of 1863 were not to be relied on. The same "fatal inaccuracy" extended to the irrigation entries, so that "notwithstanding the steady increase of irrigation from the canal the area of recorded irrigation has fallen off in all the northern *parganas*, while in the whole tract the increase is a very slight one." The recorded canal irrigation amounts to 113,694 acres. The average canal irrigated for eight years (1863-64 to 1870-71) was 77,530. The largest area

irrigated in any one year was 128,203 acres, that of 1868-69, " a year of drought and exceptional irrigation." Mr. Cadell considers that " 72,000 acres is a safe numerical average, and it may be assumed that whenever water is required, over 80,000 acres may be irrigated, as was the case in 1864-65 and 1866-67. " Good irrigable land," he adds, " is unirrigated once in every three years, and bad land every alternate year." The increase in the irrigated area amounts to 100,999, and of the cultivated area to 42,574 acres. In parganas Parchapur and Bhukaheri, in which irrigation was unknown in former days, while the cultivation has increased 14 and 33 per cent., irrigation has increased by 37,683 and 14,663 per cent. In Khatauli, on the other hand, a pargana in which, though irrigation has extended, there has been a large substitution of canal for well irrigation, the increase in the irrigated area is 125 per cent. only, against an extension of cultivation by 10 per cent. In paras. 29 and 30 (pages 70-71) Mr. Cadell has shown how the bullock labor, which is released by the canal irrigation, may be utilized in ploughing the land, pressing the sugarcane, &c.

16. In paras. 33 and 34 (pages 75-76) Mr. Cadell compares the crop statistics of the last and of the present revised settlement. The returns show that the area under the more valuable crops has been very largely extended, while there has been an increase of 20 per cent. in the kharif and 14 per cent. in the rabi crops. The percentages of increase in the better crops are:—

Rice	...	...	...	...	...	116
Cotton	...	...	...	...	...	77
Sugarcane	...	...	...	...	...	75
Barley	...	...	...	...	...	58
Wheat	...	...	...	...	...	24

Although wheat is a crop which requires far more water than barley for example, Mr. Cadell explains that so much of the best land (barley is grown in poorer soil) is now devoted to the cultivation of rain crops that the area under it has been comparatively little extended; and that in the sandy pargana of Purchapur so much additional land has been devoted to sugarcane, rice, and probably to fodder crops, that there has been no good land to spare for wheat and the area of the wheat crop is somewhat less than it was. The area under barley, on the other hand, is greater than it was, as so much of the increased cultivation has been obtained from the poorer soils.

17. Mr. Cadell has given, at page 76, the harvest prices of agricultural produce at Jalalabad, the chief grain mart in the district, for 20 years, and contrasted them with the prices given by Mr. Thornton as the average of 20 years preceding his settlement, obtained by striking an average of the prices in all the Thanahs in the district.

The Settlement Officer finds that the prices of the principal products have risen as follows:—

Wheat	...	...	16	per cent.	Makai	...	...	30	per cent.
Gram	...	...	18	ditto	Munji	...	...	21.25	ditto.
Barley	...	...	7	ditto	Dhan	...	...	18.25	ditto.
Juar	...	...	28.5	ditto	Gur	...	...	15.25	ditto.
Urd	...	...	28.75	ditto	Cotton	...	...	24	ditto.

18. While prices have risen, the means of communication have been immensely improved and extended. When Mr. Thornton settled the district it was connected with other districts by unmetalled roads only. Now a metalled road, railway, and a navigable canal, run through the district.

The population of the six parganas at the time of Mr. Thornton's settlement (1841 A.D.) is not known, but the returns of 1853 and 1872 A.D., which Mr. Cadell considers to be fairly trustworthy, show an increase in the population from 221,852 to 242,417, but the numbers of the agricultural population are said to have fallen from 121,730 to 93,899. But this falling off is "clearly owing,"

Mr. Cadell states, " to a difference in classification, the day labouring class " having been considered agricultural in 1853 and non-agricultural in 1872. The " addition of three-fourths of the Chamars, the great day labourer caste, to the number " now recorded agricultural would bring this class of the population up to the figure " recorded in 1853." With reference to the influence of the presence of irrigated land on the growth of the population, Mr. Cadell points out while population has increased in a marked manner only in those estates which are sufficiently watered by the canal, it has fallen off only in those irrigated villages which have been over saturated or in which drainage has been obstructed or neglected.

19. Mr. Cadell summarizes the "improvements" which have taken place during the term of the last settlement in the 40th paragraph of his report. Cultivation and irrigation have extended 19 and 466 per cent. respectively. Population has increased by 10 per cent. and the prices of agricultural produce have risen by about 20 per cent. The substitution of canal for well irrigation has released much agricultural labour, and the means of communication have been immensely improved. Mr. Cadell considers that rental assets have increased by 37 per cent. The increase assumed by the rent-roll of 1863-64 was, he holds, altogether inadequate. The assumed rent-roll of 1841 was Rs. 5,50,000, of 1863-4 Rs. 6,67,422, and the rental of 1872 Rs. 8,67,163.

20. In his fourth chapter, Mr. Cadell has explained his mode of inspection, his proposed rent-rates, together with his assessment and its financial results. Every effort was made at inspection to make the soil entries accurate and safe. Only fields watered in ordinary years were entered as irrigated. Circles were formed of (1) best, (2) average, and (3) inferior estates. Mr. Cadell was able to correct his assumed rates by the experience he gathered when he was placed in charge of three Court of Wards estates. Those rates, excepting in the case of irrigated 2nd *rausli*, were ordinarily below his ascertained rates. The jumma of the six parganas calculated on the assumed rent-rates comes to Rs. 4,54,712, while the jumma actually assessed is Rs. 4,41,093, being Rs. 94,184 (or 27 per cent.) over the demand of Mr. Martin's settlements, and Rs. 1,18,695, or 36 per cent. over Mr. Thornton's. The revised revenue has been collected in parganas Muzaffarnagar and Bhuma Sambalhera since 1873-74, and in the other four parganas since 1872-73.

21. At page 94, Mr. Cadell has shown that under the varying and not altogether favourable circumstances the years following the introduction of the new jummas, they have been collected without difficulty. The rent-rolls of 1873-74, 1874-75 and 1875-76 were considerably more than double the jumma of these years. The arrears shown in the tabular statement, page 95, were those of the year, and the greater part of them, Mr. Cadell considers, were, no doubt, eventually collected.

22. Mr. Cadell cites the prices at which land has sold since the revised assessments were declared as proving the moderation of his assessments. The area of the land transferred in four years 1281 fasli, 1282 fasli, 1283, and 1284 fasli, by 1 private sale, 2 sales by order of Court, and 3 mortgage, amounted to 46,990 bighas. The jumma assessed in them was Rs. 35,360. They were sold for Rs. 6,44,385, or at 18 years' purchase of the jumma. The price paid for lands transferred by (1) private sales was 22 years' purchase of the Government demand; (2) sales by order of Court, 12 years' and (3) mortgage 14 years' purchase.

On this subject Mr. Cadell's own words may be quoted—" But even when sales by order of the Courts are included, the average price of land during four years is 18 years' purchase of the Government demand, and 23 years of the assumed profits, such prices furnish strong evidence of the moderation of settlement, and could hardly be obtained if the assessments were unduly severe. The contrary criticism, which is apparently more plausible, that the prices of land show the assessments to be unduly light, must be parried by the reflection that a heavy enhancement has been taken, and that it is notoriously difficult to increase the land revenue more rapidly without im-

perilling the prosperity of the country and causing the greatest hardship to the people. But the circumstances that the present demand is in many cases light, that irrigation is still extending, and that prosperity is likely to continue, furnish sufficient reason even if this were not already determined on other grounds, for restricting the period of settlement to twenty years."

23. The Government, North-Western Provinces, in their Resolution, Revenue Department, No. 118, dated 25th March, 1870, para. 10, directed that the new assess-

* Their No. 1325A., dated 12th December, 1873. ments (viz., those to be made hereafter by Mr. Cadell) should run as proposed by Mr. Inglis for the same period as the present settlement, so as to expire at the same time with it. The Board recommended,* in submitting the final Settlement Report for the Muzaffarnagar district, excluding the parganas reported on by Mr. Cadell, that the revised assessments be sanctioned for a period of 30 years or from 1861 to 1891. Into the several points discussed by Mr. Cadell, in the concluding part of his report, Mr. Reid does not propose to enter. The most important subject, perhaps—the enhancement of the water-rates on the Ganges Canal—formed the subject of a separate and prolonged correspondence between the Board and the Government.

24. Mr. Cadell has brought to a successful termination, and at a comparatively moderate cost, amounting to little more than one and a half year's value of the additional land revenue obtained by the revision, a delicate and difficult task, which, as the result has proved, could not have been entrusted to better hands. He has shown great judgment in imposing a moderate demand without sacrificing the interests of Government. The Senior Member has great pleasure in bringing to the notice of His Honor the Lieutenant-Governor the excellent services rendered by Mr. Cadell in his settlement of the Ganges tract of the Muzaffarnagar district.

I have the honor to be,

SIR,

Your most obedient Servant,

J. S. MACKINTOSH,

Secretary.

NOTE.

THE settlement had been nearly brought to an end when I went on furlough in April, 1874, but the bulk of the report was unwritten. On my return in the end of the year I began inspection work in Bundelkhand, and the final report for Muzaffarnagar was only completed during privilege leave in 1877. On returning from leave, I held charge for three months of the Bánda district in addition to my own duties, and this additional work and the necessity of devoting the cold-weather to inspection, have still further delayed the printing of the report.

The circumstances under which this report has been prepared have not been favourable, and while parts of it written at Muzaffarnagar are fuller than was necessary, some subjects have not been treated at sufficient length. Regarding the agriculture of the tract more especially it was difficult to write satisfactorily at a distance, and some materials have been left unused. The important questions moreover connected with the influence of canal irrigation upon the rental, have not been discussed with the thoroughness which was desirable.

It was at first intended to print the pargana reports, and the final report has been written on the assumption that this would be done; as however two of the six pargana reports have been already printed in the Revenue Reporter, and as to print the pargana reports would double the bulk of this volume and the expense of printing, it has been thought unnecessary to incur the additional outlay.

BÁNDA :
December, 1878. }

A. C.

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Settlement Report on the Ganges Canal Tract in the Muzaffarnagar district.

CHAPTER I.

GENERAL DESCRIPTION OF THE TRACT UNDER REPORT.

1. THE district of Muzaffarnagar, having been formed out of parganas previously included in Sahāranpur and Meerut, is bounded on the north and south respectively by these two districts. Its western boundary is the fairly constant deep stream of the Jumna, that on the east is the shifting channel of the Ganges.

Boundaries of the district.

2. The district lies between 29°-11'-30" and 29°-45'-15" north latitude and 77°-3'-45" and 78°-10'-45" east longitude.

Position.

3. The area in 1872 was stated to be 1,659 square miles and 229 acres, and the population 690,082 souls, being 415 to the square mile.

Area.

4. The Muzaffarnagar district is divided into a succession of narrow strips, clearly defined by rivers flowing almost due north and south or by distinct natural features. Beginning from the west these are—1st, the khadir or valley of the Jumna ; 2nd, the Jumna and Kirsani doáb, fully irrigated or rather over-saturated, to the east by the Eastern Jumna canal, and to the west readily irrigable from wells, if the inhabitants had the industry to use them. Beyond this, again, comes the narrow strip between the Kirsani and the Hindan rivers, naturally fertile to the south, but dry and unproductive towards the north, and with as yet only an insufficient supply of water from the Eastern Jumna canal.

Natural divisions.

5. The western half of the district, bounded on the east by the Hindan, differs from the eastern portion in its better natural supply of water for irrigation, and also in its better average quality of soil, for east of the Hindan belts, and hillocks of sand begin to make their appearance, and to affect to a degree unknown further west the character of the soil.

Difference between eastern and western divisions.

6. The fourth portion of the district is the Hindan and Káli doáb, the only tract of any extent, except the river valleys, which is entirely beyond the influence of canal irrigation, or, to speak more accurately, cannot look for canal irrigation until a new and important branch of the Ganges canal shall be constructed. And unfortunately, although this tract has not yet benefited by canal irrigation, frequent surveys and constant rumours of the immediate construction of the Deoband branch have had a disastrous effect in discouraging the sinking of wells ; and the northern portion of this tract is still liable to be impoverished by recurring droughts, and the portion of Charthawal, which lies between these rivers, is one of the few portions of the district in which population is distinctly decreasing and the land revenue is falling off.

The Hindan and Káli doáb.

7. Here, as elsewhere in the district, soil and cultivation both improve towards the south ; and although it is chiefly in the southern parganas that sand is so prevalent, the better land is so good, irrigation is so much more generally practicable, and the strong communities of Játs and Tagás are so energetic and industrious, that they take advantage of every facility afforded to them, and overcome, as far as may be, most of the obstacles in their way. Indeed, the superiority of the southern parganas to those further north is most likely quite as much due to the character of the inhabitants as to any natural advantages of soil and situation which they enjoy ; and if the wave of Ját immigration had been stronger, it might have carried high cultivation, even independent of the canal, to the northern boundary of the district.

Superiority of soil towards the south.

The tract under report.

8. But this report has no concern with that portion of the district the situation of which has been shortly described, but relates to the land lying east of the West Káli river and west of the river Ganges. Indeed, as far as regular settlement operations are concerned, it has to do only with the upland portion of the Ganges and West Káli doáb, and with the land attached to upland villages stretching into the valley of either river. To this tract are attached also 13 estates still retained in pargana Muzaffarnagar which lie on the left bank of the West Káli.

Position of the Ganges Káli doáb.

9. The Ganges and Káli doáb of the Muzaffarnagar district is situated between $29^{\circ}10'20''$ and $29^{\circ}43'30''$ north latitude and between $77^{\circ}37'94''$ and $78^{\circ}10'45''$ east longitude. It contains seven parganas, Púrchapár and Gordhanpúr to the north, Muzaffarnagar and Bhúkarheri in the central tract, Khatauli, Jánsath, and Bhúmá Sambalherah—lying from west to east on the southern boundary of the tract and of the district. Gordhanpúr forming the north-east corner of the district, is entirely in the Ganges Valley, and Púrchapár, Bhúkarheri, and Bhúmá Sambalherah stretch into the valley, and the khadir or wholly valley portions of these parganas have been excluded from the regular revision of settlement which has now been completed for the upland portion of the doáb, and for that limited extent of valley land which is attached to villages partly on the upland.

Boundaries of the tract under report.

10. The tract therefore which is the subject of this report is bounded on the north by parganas Deoband and Manglaur of Saháranpur; on the West by the West Káli river, except in pargana Muzaffarnagar, which includes a broken line of villages beyond the West Káli, adjoining immediately parganas Charthawal and Bagra. To the south lie parganas Sirdhanah, Meerut, and Hastinapur, of Meerut, while to the east the tract is bounded by the khadir or river valley which lies between the upland and the Ganges.

General features of the Ganges canal tract.

11. The Ganges canal tract of Muzaffarnagar, as that portion of the Ganges and West Káli doáb with which this report is concerned may be called, is wedge-shaped, increasing in breadth from 12 miles near the northern boundary to 26 miles adjoining the Meerut district. The length is 34 miles and the total area is 569 square miles. The general slope of the country is from the north and east to the south and west, and the high bank overlooking the Ganges valley extends in an unbroken line through the district. This circumstance seriously affects the character of the immediate neighbourhood of the valley on either side of the tract. On the east, from the upland into the Ganges valley the transition is rapid, and the level upland is bordered by a belt of ravine country from one to two miles in extent, widening out to wards the southern boundary. Although in places there is above the broken ground much waste land which may one day come under the plough, the ravines themselves form an extensive tract of unculturable waste, and towards the north they are making serious inroads on the upland. Except where the upland has been recently cut away, the broken ground is ordinarily covered with brushwood, which affords shelter for occasional panthers, and when required, for wild pig migrating from the khadir to the cane-fields of the upland. Wolves, too, are frequently met with in the neighbourhood of the petty hamlets which are scattered along the edge of the central and southern upland.

Towards the west, on the other hand, the level falls away more gently, and there is in the northern pargana but little broken ground between the upland and the valley of the West Káli river. Towards the south, however, there is a change, the banks are higher and there is more irretrievably broken land. In this neighbourhood, moreover, which is generally conterminous with pargana Khatauli, the slope is towards the valley of the East Káli, and the drainage of the country passes down the middle of the tract.

The slope from north to south is very marked, and from within half a mile of the northern boundary to a short distance beyond the southern boundary of the district no less than five falls are required on the canal to moderate the otherwise

excessive slope in the channel. The difference between the level of the Mahomedpúr falls just to the north, and that of those at Salawa, just to the south of the district boundary, is one of no less than 78 feet, the intervening distance being 28 miles.

12. The Ganges canal enters the district within a mile of the broken land above the Ganges valley, and leaves it within six miles of the West Kali river, having in its course through the district left the watershed to the east and passed through the basin of the East Kali river in order to reach the extensive tract between that river and the Hindan, into which the West Káli falls a few miles below the southern boundary of the tract which is the subject of this report. At a point about half way in the course of the main canal through the district, just below the village of Jauli, the branch formerly named from its proposed ultimate destination the Fatehgarh branch, and now called the Anupshahr branch, is carried out towards the south-east, and irrigates a portion of the district in that direction. This branch, however, which leaves the main canal just below one of the numerous falls, runs at such a low level that, as far as this district is concerned, it is rather an obstacle than a help to irrigation, and the villages which are wholly dependent upon the branch are not likely to enjoy a satisfactory supply of water until arrangements are made for supplying them with irrigation from the main canal.

The Ganges canal.

13. The chief physical feature of the tract is the prevalence of sand, which to the north runs in close parallel ridges from north to south. In the southern parganas these are dispersed more widely and are less clearly marked; but on the other hand, an extensive sand plain extends from the eastern portion of Muzaffarnagar, through the northern portion of Jánsath, and in a south-easterly direction through Bhúmah Sambalherah into the Meerut district.

Physical features sand-hills.

This sand plain gives to the south-eastern pargana an enormous excess of bad soil, and in Bhúmah Sambalherah less than one-third of the cultivated area is naturally good land; but the sand is for the most part level, and there is in this way greater hope of improvement than in the northern pargana Púrchapár and in Muzaffarnagar, which are both traversed by lines of sand-hills, not merely by level belts of sand.

With the exception of Bhúmah Sambalherah, the natural fertility of the tract steadily improves towards the south. In Púrchapár little more than one-third of the cultivated area is natural loam or clay. In Bhúkarheri and Muzaffarnagar, the east and west central parganas, the proportion is increased to about one-half; in Jánsath it rises to sixty per cent.; and in the south-western pargana Khatauli more than two-thirds of the pargana are naturally good loam. Irrigation and careful cultivation by an increasing population are gradually changing the character of much of the sandy land; but a tract in which, even now, only 51 per cent. of the cultivated area is entered loam and clay, and in which before the opening of the canal, irrigation was for the most part difficult, must thirty years ago have fully deserved the description of it given by Mr. Thornton as being "dry and sandy."

14. For throughout the sandier portions irrigation was practically unknown. Except in the south-eastern parganas earthen wells could not be worked, and elsewhere, even where masonry wells existed in sufficient numbers, water was so distant from the surface that only garden land was irrigated. Close round Muzaffarnagar masonry wells were numerous; and in the south of Jánsath, in the south-west corner of Bhúmah, and in the greater portion of Khatauli, irrigation from wells, masonry and earthen, was general, but in by far the greater portion of the tract, wells were few and far between, and water was distant.

Former want of irrigation from wells.

And there are no other sources of irrigation; there is no natural jhíl in this portion of the upland, and the size of the ponds seems to be in almost in variable proportion to the size of the village inhabited or deserted, which is the cause of their existence. To use such scanty and precarious supplies for irrigation, would have

From jhíls.

caused far more inconvenience to the people at large than would have been made up for by any slight benefit to individuals, and it was only in exceptional cases that such ponds were used for irrigation.

From rivers.

The rivers, again, run very far below the level of the upland, and although the valleys must have been of much use in years of drought, irrigation from the rivers could not be general, and minor streams were few and unimportant, and for this purpose useless. To the north there are none, and it is only in pargana Muzaffarnagar that small drainage hollows begin to join the West Káli river. It is in the south-east corner of this pargana, too, that the East Káli river had its source, and farther south there are several small depressions which drain into the East and West Káli rivers.

Change worked by the canal.

15. Thirty years ago, then, the most striking features of this tract must have been the want of means of irrigation and the prevalence of sand, and in a year of drought the fertility of the river valleys must have formed a pleasant relief to the eye wearied with the view of scanty crops in an unirrigated upland. Now all is changed: for many years nearly all the upland villages have been supplied with irrigation from the canal, and year by year fresh estates are added to the list until only a few remain in Bhúmáh, Jánsath, Khatauli, and Muzaffarnagar, which are not watered from this source.

With the old difficulty of irrigation, too, has disappeared in a great measure the extreme bareness of the country, which was the result. The line of the canal is marked by a thick belt of plantations on either side, and notwithstanding the serious check given to tree-planting by tenants, in recent years, by the decisions of the courts, ancient custom has not entirely lost its force, and the privilege which was formerly exercised only by a few is now gradually being asserted by many; and as the northern pargana of Purchápár, which, next to Bhúmáh, was the barest of all, is owned for the most part by cultivating communities, there has then been little check to the improvement which had begun in that neighbourhood.

Injury caused by the canal on the upland.

16. But unfortunately the fertilization of the previously dry upland has been accompanied by the deterioration or by the ruin of the lower lands. And as so much of this report will have to be devoted to the statement of the benefits which have been conferred upon the district by the Ganges canal, it is necessary that I should note in passing the needless injury that has been caused on the upland by the obstruction of drainage by the canal and its distributaries.

A great work like the Ganges canal could not of course be turned aside to avoid the depression of the East Káli river, but it is to be regretted that the existence of this depression as a line of drainage was not earlier and more practically acknowledged. But besides this, distributary after distributary was run out without regard to the drainage of the country, and for many years the necessity of allowing waterway under such rajbahás was not practically admitted; and it is only recently that the department has made it a rule that drainage should be facilitated instead of being obstructed. Now unfortunately the remedy has been rendered more difficult by the fact that the railway engineers seem to have considered that obstruction of drainage by irrigation works justified similar obstruction by the railway. The argument was not a good one, for a canal distributary running across a drainage line and unprovided with permanent waterway under it could be cut when flooding became serious, whereas the railway embankment forms a much more permanent barrier.

Recent improvements in drainage.

17. Within the last few years very great improvement has been effected. One of the worst of the offending distributaries has been abandoned, permanent means of escape for the surface drainage have been constructed under several others, and in Muzaffarnagar an important system of drainage has greatly improved the condition of the neighbourhood; and similarly thorough work in the southern parganas will, it may be hoped, quickly remedy the evils which have resulted from want of forethought in past years.

18. In the Muzaffarnagar pargana especially, as to a less extent elsewhere, it must be admitted that the evil appears more serious owing to the improvements which the canal itself has effected. Thirty years ago, when land was in less request, wide margins were left round ponds and depressions, and it was only in seasons of excessive rainfall that the flooding of cultivated land occurred. Now, cultivation has encroached upon the old depressions, small ponds have been ploughed up, and the area of cultivated land so situated as to be liable to injury from a heavy but not exceptional rainfall, has been largely increased. If, then, the Irrigation Department has a good deal to answer for with reference to drainage obstruction, it is also frequently blamed for what is only a natural result of the increased value of land which thirty years ago was allowed to lie waste, while it now swells the profits of the landlord in a dry year and intensifies the outcry against the department in a season of plentiful rain.

Apparent aggravation by extension of cultivation.

And now there is less ground for complaint. A good deal has been done already, and when the projects under consideration shall have been completed, there will, as far as I am aware, remain only the south-west corner of the tract (in which the railway, the canal and its distributaries have run more than ordinary riot among drainage lines) from the town of Khatauli to the Meerut boundary to be drained.

19. But besides the injury to the upland which has been occasioned by irrigation works, another evil may be justly attributed to the canal, and that is the great increase of marsh in the valleys of the rivers. As far as the tract with which this report deals is concerned the injury has not been very serious, because the valley land is limited in extent, but its deterioration has been general and complete alike in the Ganges valley and along the West and East Káli rivers; and it is probable that only in the case of the land lying along the latter streams, and especially in the valley of the East Káli, the reclamation of the land would give any adequate return for the expenditure required. When, therefore, the great improvement due to the canal comes to be estimated, it will be necessary to make a comparatively trifling allowance for the injury to the valley which has been found inseparable from the improvement of the upland.

Injury to the valley lands.

20. In respect of communications the tract under report is now well off. A metalled road and a navigable canal pass through it from north to south, and in 1868 the Scinde, Panjáb, and Delhi Railway was opened from Meerut to Saháranpur.

Communications.

The minor roads on the upland are maintained in fair order, but those in the valleys are still very indifferent; and a very important line of communication traversing the district from the Ganges to the Jumna through Muzaffarnagar and Shamli and connecting Western Rohilkhand with Panipat in the Panjáb is still only partially bridged and metalled.

Abstract statement of rainfall at the various rain stations in the Muzaffarnagar district from 1860 to 1875, both years inclusive.

Station.	1860.	1861.	1862.	1863.	1864.	1865.	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	Total.	Average.
Shámli ...	6.5	18.9	26.7	29.7	18.6	22.3	15.8	43.8	12.2	32.2	29.6	28.6	30.2	29.8	36.2	36.1	417.2	26.07
Burhana ...	8.7	15.9	33.2	34.6	25.4	38.0	21.5	32.7	17.6	14.7	27.2	41.3	34.1	31.6	33.8	27.0	437.1	27.32
Muzaffarnagar,	7.9	27.0	33.8	29.9	25.3	29.9	26.7	35.6	17.1	24.3	34.0	36.2	32.5	29.5	43.8	33.0	466.5	29.15
Jásmath ...	16.5	30.5	38.3	29.0	23.3	37.2	26.4	32.8	19.8	26.5	24.7	45.4	25.7	35.1	55.2	40.3	566.7	31.66

21. The rainfall, if the statistics given above are correct, is greater on the eastern than on the western side of the district, and is greatest of all, it is believed, along the high bank of the Ganges. The average rainfall during 16 years was 26.07 inches.

Rainfall.

at Shámli, 27·32 at Burhana, 29·15 at Muzaffarnagar, and 31·66 at Jánsath. During the same period the average monthly rainfall has been as follows :—

Station.	1860.	1861.	1862.	1863.	1864.	1865.	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.
Shámli ...	·54	1·57	2·22	2·47	1·55	1·65	1·31	3·65	1·01	2·68	2·46	2·38	2·51	2·48	3·01	2·0
Burhana ...	·72	1·32	2·76	2·88	2·11	3·16	1·79	2·72	1·46	1·22	2·26	3·42	2·84	2·63	2·61	2·25
Muzaffarnagar,	·65	2·25	1·81	2·49	2·10	2·49	2·22	2·96	1·42	2·02	2·83	3·01	2·7	2·45	3·65	2·75
Jánsath ...	1·37	2·54	3·19	2·41	1·94	3·0	2·2	2·73	1·65	2·2	2·05	3·78	2·14	2·92	4·6	2·35

Climate.

22. There can be little question that the climate of Muzaffarnagar is distinctly worse than it was before irrigation from the canal became so general, and the cultivation of rice was so much extended. Even if the canals be absolved from all blame with reference to the recent fever epidemic of 1867 and subsequent years, there remains the unquestionable fact that malarious fever is extraordinarily prevalent and fatal, and that in many of the best villages the population is decreasing. But it may be hoped that the drainage operations which have been completed and are proposed, and the restriction of canal irrigation and of rice cultivation, especially in the immediate vicinity of villages and towns, may have some effect in modifying the evils which have followed the over-saturation of the soils and the neglect of drainage in the distribution of canal water.

Prevalent diseases.

23. Cholera is a less constant visitor than in most districts, and its ravages are usually less severe than elsewhere. The great cause of mortality is malarious fever, which even in 1875, when cholera was unusually fatal, was the cause of over 76 per cent. of the deaths reported. To small-pox were attributed 9 per cent., to bowel complaints 8 per cent., to cholera 3, and to injuries and other diseases 4 per cent. It is curious that although for so many years some attention has been paid to the prevention of small-pox and cholera, it should only quite recently have been thought necessary to prevent the wholesale extension of fever owing to obstructed drainage and over-saturation of the soil.

Temperature.

24. The climate passes during the year through the usual changes of temperature and humidity. The mean yearly temperature of the district is about 76° Fah.; the mean monthly temperature may be shown as follows : January 58°, February 64°, March 70°, April 80°, May 90°, June 98°, July 88°, August 86°, September 84°, October 73°, November 64°, December, 57°.

Recent mortality.

25. The mortality recorded during recent years is as follows, the population of the district being taken to be 690,209 :—

Year.	Cholera.	Small-pox.	Fever.	Bowel complaints.	Injuries.	Other causes.	Total.	Deaths per 1,000 of the population.
1871 ...	95	4,352	16,597	1,811	118	499	23,362	32·64
1872 ...	35	1,097	13,784	1,372	114	445	16,837	24·60
1873 ...	5	3,189	11,932	1,296	188	609	17,150	24·84
1874 ...	2	877	12,955	1,046	167	657	15,704	22·75
1875 ...	561	1,703	14,521	1,605	207	554	19,151	27·75

During these years much has unquestionably been done for the health of the district, but until registration shall become more perfect it would be useless to attempt to draw conclusions from the few statistics which have been collected.

26. There is no want of local markets in the Ganges canal tract of the Muzaffarnagar district; each of the small parganas has its market town, and most have more than one. But with the exception of Miránpur, the chief town of Sambalhera, the south-eastern pargana, there was until recently no market of more than local importance to the east of the West Káli river; and Miránpur, although boasting a fair trade in salt and sugar, was greatly inferior in importance to either Shámli or Jalálpur. Khatauli was and still is a grain market of moderate importance, the position of which on the line of railway and on the Ganges canal gives it considerable advantages when the export of grain is stimulated by scarcity in distant markets to the east.

Towns and markets.

27. But nowadays by far the most important market in the tract is Muzaffarnagar itself, which has greatly risen in importance since the opening of the railway, and has already attracted a large portion of the sugar trade from Miránpur in the south-east, and Shámli in the west. Formerly the sugar trade necessarily followed the road into the Panjáb by Shámli and Panipat to the western markets, but now a great portion of the sugar exported from the district is sent by railway. The recent scarcity in Bengal, on the other hand, gave Muzaffarnagar a hold upon the grain market, which it is not likely to lose. Up to 1872 Muzaffarnagar was a town of chiefly official importance, the population of which had fallen off rather than increased since the previous census. It was founded by Sayyid Khan Jahán in the reign of Sháhjahán, and derived its name from that of the founder Abul Muzaffar upon whom the title by which he is more generally known was conferred by his imperial master. There is no building of any note in the town, and the fine mansions, handsome mosques, and tombs constructed in the days of Sayyid prosperity must be looked for in the earlier headquarters of the clan near Miránpur and at Jánsath and Khatauli. The streets are poor and irregular, the only straight one being the trunk road, which is lined with shops. The Government buildings are not above the average in appearance, and are probably below the average in stability. The population of the town in 1872 was 10,793.

The town of Muzaffarnagar.

28. *Abstract statement of population for the six parganas under revision in the Muzaffarnagar district according to census of 1872.*

No.	Pargana.	TOTAL POPULATION.			AGRICULTURAL POPULATION.			Rate of population per square mile of cultivated and culturable area.	Rate of cultivation per square.	Rate of agricultural population per acre of cultivated and culturable area.	Rate of population per acre of cultivated and culturable area.
		Males.	Females.	Total.	Males.	Females.	Total.				
1	Púrchapár	18,184	14,651	32,835	7,489	5,789	13,278	}	}	278	478
	Upland	18,170	14,634	32,804	7,476	5,775	13,251				
	Valley	14	17	31	13	14	27				
2	Muzaffarnagar	26,819	21,843	48,663	8,706	7,018	15,724	}	}	289	793
	Bhúkarheri	31,689	17,887	49,576	8,710	7,086	15,812				
	Upland	20,040	16,640	36,680	7,739	6,381	14,020				
3	Valley	1,649	1,247	2,896	987	805	1,792	}	}	288	878
	Jauli Jansath	20,056	17,041	37,097	8,702	7,229	15,931				
	Khatauli	26,855	22,401	49,256	10,255	8,155	18,410				
4	Bhumah Sambalhera	19,288	16,612	35,900	7,851	6,696	14,547	}	}	284	800
	Upland	26,905	14,723	41,628	6,312	5,406	11,618				
	Valley	2,483	1,889	4,372	1,639	1,290	2,929				
Total		132,992	110,435	243,427	51,928	41,971	93,899	}	}	482	415
Upland		128,436	107,282	235,718	49,289	39,862	89,151				
Valley		4,446	3,153	7,599	2,639	2,109	4,748				

29. The population of the tract under review is shown in the statement given above to be much denser than has hitherto appeared to be the case, owing to the exclusion from the calculation of the khadir or valley portions of the eastern parganas, Púrchapár, Bhúkarheri, and Bhumah Sambalherah. On the upland the density of the population may be looked upon as fairly sufficient, considering the agricultural circumstances of the tract, in one pargana alone, Khatauli, and even here there

Density of population.

is room for a larger population. The population is least sufficient to the north and north-east, and increases in density towards the south and west, as the following abstract shows :—

		<i>Purchapár.</i>		
Population to square mile of total area	...	...	369	
Ditto of cultivated and culturable area	...	...	443	
		<i>Muzaffarnagar. Bhákarheri.</i>		
Population to square mile of total area	...	...	446	368
Ditto of cultivated and culturable area	...	...	507	432
		<i>Khatauli. Jansath. Bhámah Sambalherah.</i>		
Population of square mile of total area	...	...	507	457 416
Ditto of cultivated and culturable area	...	...	578	510 510

But even in Khatauli, Jansath, and Muzaffarnagar, the population is not probably more sufficient for the agricultural wants of the locality than in the northern parganas, for in the two former there is still a considerable extent of irrigation from wells, and in the third the urban population entirely unconnected with agriculture is greater than elsewhere.

Distribution of population.

30. In Muzaffarnagar, as in other districts, in which there was long continued disorder before and immediately after its acquisition by the British Government, the abandonment of the smaller hamlets was a blow from which the district did not quickly recover; and although both before and since 1841 many deserted hamlets have been repeopled, there are still fewer villages and hamlets than in many other parts of the country, and even in the upland alone there is on an average only one village or hamlet to 1,197 acres. There are, however, few portions of the tract in which there is a distinct want of population, and along the upland of Púrchapár and Bhúkarheri, where it is most required, the absence of wells renders the settlement of new hamlets difficult and expensive.

The average area to each hamlet is greatest in the parganas to the north and west, in which the population to the square mile is smallest; and the parganas which are best in this respect are Khatauli with an average of 849 acres per hamlet and Bhúmah Sambalherah with an average of 978.

Villages and hamlets.

31. For agricultural purposes the best villages are those with a population of from 500 to 2,500, and such villages contain 135,404 of the total population of the tract, smaller hamlets containing 43,264 and larger towns 64,749. The subjoined statement shows the number of villages and hamlets in each pargana in 1865 and in 1872. It will be seen that the increased population has tended not to the planting of new hamlets, but to raise petty hamlets into the rank of substantial villages.

Statement of towns and villages classed according to population in the six parganas of the Muzaffarnagar district, the settlement of which has been revised.

Population.	Pachpore.				Meerut.				Bhatkheri.				Jauli Jamath.				Khatauli.				Bhambh Sumbhath.				Total.			
	1865.		1872.		1865.		1872.		1865.		1872.		1865.		1872.		1865.		1872.		1865.		1872.		1865.		1872.	
	Vil- lages.	Per- sons.	Vil- lages.	Per- sons.	Vil- lages.	Per- sons.	Vil- lages.	Per- sons.	Vil- lages.	Per- sons.	Vil- lages.	Per- sons.	Vil- lages.	Per- sons.	Vil- lages.	Per- sons.	Vil- lages.	Per- sons.	Vil- lages.	Per- sons.	Vil- lages.	Per- sons.	Vil- lages.	Per- sons.	Vil- lages.	Per- sons.	Vil- lages.	Per- sons.
Under 100	1	50	4	19	1	79	2	38	13	458	10	513	5	265	2	125	9	96	4	187	9	328	7	392	31	1,220	29	1,315
Upland	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Valley	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
100-500	8	1,375	8	1,397	8	1,151	8	1,118	7	1,090	6	917	6	1,246	6	892	13	1,836	13	2,170	8	1,164	6	1,037	16	585	13	695
Upland	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Valley	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
200-500	17	5,844	20	6,521	16	5,664	12	4,463	15	4,633	14	4,751	21	7,501	20	6,486	24	8,399	30	7,356	16	5,172	15	4,667	109	38,003	101	84,626
Upland	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Valley	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
500-1,000	6	9,995	5	3,263	15	11,705	19	13,449	11	7,458	13	9,187	16	10,350	21	14,030	16	12,185	22	15,309	12	9,768	13	10,587	78	55,396	93	65,839
Upland	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Valley	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1,000-2,500	5	8,259	5	8,175	14	19,178	14	18,749	8	13,503	7	11,568	4	6,516	9	14,837	10	15,450	9	14,837	6	8,317	7	9,645	47	71,321	46	99,585
Upland	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Valley	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2,500-5,000	4	13,846	4	13,329	...	...	...	...	3	9,826	4	13,640	1	2,744	3	9,567	1	3,665	1	3,665	3	6,043	1	5,924	10	33,828	13	42,073
Upland	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Valley	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5,000-10,000	...	...	...	...	1	10,748	1	10,636	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Exceeding 10,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	43	38,261	46	52,835	55	49,518	56	48,653	57	56,959	54	59,576	56	54,543	55	57,007	68	41,712	71	69,255	52	34,452	59	36,000	331	230,446	332	248,417
Upland	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Valley	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

Prevailing castes.

32. The caste statement which will be found in appendix I. shows that the most numerous castes in the Ganges canal tract are as follows:—

No.	Name of caste.	Hindus.	Muhamma- dans.	Total.	Percentage.
1	Chamárs	42,320	...	42,320	17·8
2	Játs	17,652	731	18,383	7·5
3	Mahájans	12,867	...	12,867	5·7
4	Gújars	11,110	...	11,110	4·6
5	Julahas	1,029	9,941	10,970	4·5
6	Brahmans	10,598	...	10,598	4·3
7	Sánis	10,546	...	10,546	4·3
8	Kahárs	8,947	...	8,947	3·6
9	Sayyids	...	7,929	7,929	3·2
10	Bhangis	7,740	...	7,740	3·1
11	Sheikhs	...	7,265	7,265	3·0
12	Tagás	5,630	1,641	7,275	3·0
13	Rájputs	4,084	2,345	6,429	2·6
14	Jhojhas	...	5,510	5,510	2·3
15	Gárah	...	5,160	5,160	2·1
16	Gadaríyas	4,865	150	5,015	2·0
17	Nais	2,225	2,468	4,773	2·0
18	Kumhárs	4,650	48	4,698	2·0
19	Kassabs	...	4,695	4,695	2·0
20	Barhais	3,898	657	4,555	2·0
21	Chauháns	4,143	9	4,152	2·0
22	Telis	...	3,528	3,528	1·9
23	Rawas	2,443	...	2,443	1·0
24	Jogis	2,276	276	2,552	1·0
25	Patháns	...	3,086	3,086	1·0

Of these, the Játs, Sánis, Tagas, Jhojhas, Gárahs, and Rawas are the best cultivating castes, and their combined numbers amount to slightly less than 20 per cent. of the whole population and to more than 50 of that recorded as agricultural. And the enormous number of the members of the agricultural labouring castes is a feature of almost as great importance as that of the sufficient proportion of the best cultivating castes, for a sufficient supply of field labour is absolutely necessary for the cultivation of the most valuable crops even in parganas in which Játs, Rawas, Gárahs, and Jhojhas, the best cultivating castes of all, most largely predominate. Nearly one-third of the population is Muhammadan, and of this the Sayyids number only one-tenth, the Sheikhs are slightly less numerous, while the great bulk of the Muhammadan population is composed of the Nan-muslim cultivating tribes, Gárahs, Jhojhas, Rangars or converted Rájputs, Tagás, and the like, or of the artizan and menial classes, Joláhas (the most numerous of all), Kassabs, Telis, Nais, Bhistis, and Lohars. Patháns are not very numerous, and there are hardly any Mughals.

Proportions in each pargana.

33. The following abstract shows the proportions of the more numerous castes in each pargana. Chamárs head the list in every case; Játs come next in three parganas; while Rawas, a somewhat similar tribe, come second in Khatauli. In Chapár, the existence of a large Taga colony gives the tribe a prominent position, while in Bhúmá Sambalherah the chief town Miránpur-Kaithorah is the headquarters of an influential Mahájan family, the members of which have since the days of the Mughal emperors devoted themselves to the service of the state rather than to the hereditary pursuits of their caste. The Sánis, who form so important a tribe in Ján-sath and in the tract generally, are somewhat similar to Mális, but they devote themselves more to general farming and less to garden cultivation.

As agriculturists they are about half way between the Ját and the Máli; their cultivation is not so minute as that of the latter, while they limit the most careful

farming to a smaller proportion of the land at their disposal than is the case with the Jâts :—

No.	Pargana.	Most numerous caste.	Second.	Third.	Fourth.	Fifth.	Sixth.	Seventh.	Eighth.	Ninth.	Tenth.
1	Párehojár ...	Chamárs. 18 85	Tagás. 11 19	Gújars. 6 81	Brah- mans 5 35	Jhojhas. 5 30	Játs. 5 0	Jola- has. 4 81	Kaháras. 4 52	Garahs. 4 52	Baniyás. 4 0
2	Bhúkarheri ...	Chamárs. 19 92	Játs. 11 85	Sánis. 5 0	Jola- has. 5 0	Brah- mans. 4 28	Chau- hans. 3 87	Kaháras. 3 79	Gújars. 3 48	Jhojhas. 3 48	Baniyás. 3 48
3	Muzaffarnagar ...	Chamárs. 17 39	Játs. 8 74	Baniyás. 7 46	Garahs. 7 31	Gadari- yás. 6 59	Jola- has. 6 17	Brah- mans. 4 37	Kaháras. 4 0	Sayyids. 3 75	Bhangis. 3 46
4	Khatauli ...	Chamárs. 17 52	Rawas. 6 35	Sánis. 6 23	Játs. 5 54	Baniyás. 5 52	Jola- has. 4 38	Shaikh- has. 4 23	Rajpúts. 4 14	Brah- mans. 4 0	Kaháras. 3 90
5	Jánsath ...	Chamárs. 14 45	Sánis. 8 94	Sayyids. 8 68	Játs. 6 32	Gújars. 6 11	Baniyás. 4 56	Jola- has. 4 58	Shaikh- has. 4 26	Jhojhas. 4 19	Bhangis. 3 0
6	Bhémah Sambal- herah.	Chamárs. 16 91	Baniyás. 8 52	Gújars. 8 29	Játs. 7 65	Chau- hans. 7 0	Brah- mans. 5 53	Sayyids. 3 38	Bhangis. 3 41	Kaháras. 2 62	Jogis. 2 61
Total of the six parganas.		Chamárs. 17 3	Játs. 7 5	Baniyás. 5 7	Gújars. 4 6	Jola- has. 4 5	Brah- mans. 4 3	Sánis. 4 8	Kaháras. 3 6	Sayyids. 3 3	Bhangis. 3 1

34. Notwithstanding the decline of the Sayyids which will be described later, Proprietary classes. the clan still owns more land than any other class, but instead of more than two-thirds, they now own a little more than one-third of the Ganges canal tract. Of the classes that have risen upon the ruin of the Sayyids the Mahájans are the most important, but the single proprietor who has accumulated the largest property is the Nawáb of Karnál.

The chief proprietors in the tract with the area of their estates are as follows:—

*Statement of chief landlords in the six parganas of the Muzaffarnagar district, the assess-
ment of which has been revised.*

No.	Pargana.	Sayyid Husein Ali Khan and ne- phews of Jánsath.	Nawáb Armat Ali Khán.	Jawa- ladat, Mahá- jan of Chapár.	Bel- deo Sahai Bro- ther of Mu- saffar.	Sayyids Amir Husein & Wazir of Husein of Sam.	Ude- am and Nihál Chand, Mahá- jans of Mu- saffar.	Khairati Ram and Ghasi Kám, Játs of Maula- haur.	Rája Kasa Ali, son of Záfar- yab Ali of	Gulam Hasnain, &c., Sayyids of Janli.	Sayyid Muham- mad Husein of Ra- theri.
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35. The subjoined statement shows the area owned by each caste in the tract under report.

*Extent of land owned
by different castes.*

The cultivating castes—Játs, Tagas, Jhojhas, Rajpúts, Rawas, Sánis, Garahs, and Gujars—are all represented, and although the holdings of the last-named caste are swollen by the estates of the Rája of Landhaura, they as well as others have not generally lost ground in recent years, and have gained ground since the beginning of our administration.

Statement of ownership by caste.

Caste.	Purchaser.			Manufacturer.			Distiller.			Bhimach Sambhalwar.			Total.		
	No. of persons.	Area in acres.	Jama.	No. of persons.	Area in acres.	Jama.	No. of persons.	Area in acres.	Jama.	No. of persons.	Area in acres.	Jama.	No. of persons.	Area in acres.	Jama.
			Rs. s. p.			Rs. s. p.			Rs. s. p.			Rs. s. p.			Rs. s. p.
1 Brahmins	70	150	274 4 3	70	235	340 7 8	85	263	418	32	96	932 2 6	332	1,889	2,697 3 10
2 Bhojals	10	136	265 14 0	9	2,363	5,117 15 0	7	5,006	2,445	7	979	813 4 0	64	14,901	18,074 14 1
3 Pathans	17	40	57 5 8	25	345	825 8 4	23	34	74	4	56	460 13 5	211	2,492	3,061 13 2
4 Taks, Hindis	1,112	9,729	17,668 6 9	344	4,318	4,453 16 8	25	1,077	1,676	...	...	...	1,096	27,722	28,836 13 6
5 Taks, Musal-	160	506	791 14 8	16	116	126 12 6	...	...	...	...	...	...	320	1,365	2,113 6 6
6 Jats, Hindis	381	5,266	10,661 15 0	62	2,724	2,369 13 4	327	7,081	2,326 12 4	122	4,479	6,888 12 3	1,035	28,878	38,196 3 8
7 Jats, Musalmans	5	53	63 16 3	...	...	...	...	...	...	...	...	...	5	53	63 16 3
8 Jats, Jhas	107	1,218	2,568 8 9	...	...	...	...	...	...	...	...	...	309	1,849	2,618 8 9
9 Rajputs, Hindis	11	737	698 8 0	2	72	104 6 0	15	174	258 10 2	...	143	160 5 0	428	7,040	9,444 5 11
10 Rajputs, Musal-	...	...	...	127	524	678 3 0	...	...	...	...	...	...	127	524	678 3 0
11 Rawas	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12 Sains	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13 Sayyids	38	2,111	1,765 13 6	317	16,618	21,924 11 5	334	25,078	34,896 13 0	317	24,085	31,903 10 2	1,746	124,660	159,295 14 3
14 Sikhs	216	2,267	5,436 10 2	32	39	66 3 19	217	6,318	8,177 0 0	20	39	51 14 0	648	20,104	23,560 2 3
15 Kayaths	...	...	...	2	8	7 8 0	14	492	678 11 0	...	10	17 8 0	39	648	773 5 0
16 Khatris	...	...	...	1	11	18 8 0	...	...	...	...	409	322 11 0	5	419	342 6 0
17 Garabs	39	764	865 7 6	67	638	769 12 3	...	...	...	...	...	...	156	1,417	1,618 3 9
18 Gajars, Hindis	439	9,723	16,897 12 1	64	1,066	1,507 0 9	98	109	360 15 0	63	4,185	3,568 18 3	679	25,189	34,066 11 4
19 Marhals	...	...	...	12,001	18,507	7 11	...	...	...	...	...	...	...	...	...
20 Mahajans	97	1,954	7,088 3 8	168	16,802	23,863 5 5	118	16,660	19,377 11 3	68	11,900	12,466 14 7	793	75,332	1,04,452 10 8
21 Other castes	64	355	369 3 11	76	32	448 10 1	48	236	421 12 3	...	...	...	286	1,625	2,318 14 4
Government	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	2,790	29,251	69,560 0 0	1,415	16,207	22,160 0 0	1,234	61,212	74,212 0 0	1,397	62,349	69,106 0 0	648	49,368	4,41,098 0 0

36. There are few parts of the country in which less attention is paid to caste in the fixation of rents, and, except in the case of Sayyids, there is practically no caste which is ordinarily favoured. Here and there a village may be found in which a Rájput pays a lower rate, but it is distinctly unusual, and the indulgence may generally be accounted for by something besides caste, by some tradition of old proprietary right, or by the fact that the privilege has come down from an ancestor who served under the Sayyids, and who paid part of the rent of his land by military service. There is an unquestionable tendency for rents to be higher in villages cultivated mainly by the best castes, but in such estates all cultivators ordinarily pay alike, and favour is very seldom shown to Rájputs and hardly ever to Brahmans.

The great distinction which is observed is between occupancy tenants and tenants-at-will, and in not a few instances the most enlightened landlords have shown a tendency to pay but little attention even to this distinction, and to be satisfied with the same rents from the unprotected class that they are able to obtain from the protected tenants. And there can be little question that if landlords as a rule would look to their own pecuniary advantage, they would do wisely to hold less exaggerated views regarding the proper position of landlords, and to be less inimical than they ordinarily are to tenant right. For it is difficult for a community to become really prosperous unless the members of it have some security that they will enjoy the fruits of the improvements which they may be tempted to make; and, unless an estate is cultivated by prosperous tenants, it is difficult to obtain a full rental, and still more to collect that rental regularly and without arrears. After some experience of the management of estates in this district I am convinced that the acquisition of occupancy right is in the long run no disadvantage to the landlords; improvement is steadily but gradually effected, management becomes less difficult and expensive, balances are fewer and more likely to be realized.

37. The circumstance, therefore, that of the cultivated area of this tract so large a proportion is held by occupancy tenants as such, and that, comparatively speaking, so little is held by cultivators who are mere tenants-at-will, is in my opinion of great importance as tending to the prosperity of the country and as forming in some measure a guarantee of its continuance. The statement given at length in appendix II. is necessarily bulky, and it is well that some of its most important features should be discussed in succession.

Number of occupancy tenants and the advantages involved.

The areas occupied by each class of cultivators are—

					Acres.	Percentage.
Cultivated by proprietors as such	...	...	...	...	53,735	20.32
Ditto ditto in the capacity of occupancy tenants	...	...	...	...	1,825	0.68
Ditto ditto in the capacity of tenants-at-will	...	...	...	...	2,098	0.80
Ditto by occupancy tenants as such	...	...	...	...	129,478	48.95
Ditto ditto in the capacity of tenants-at-will	...	...	...	...	19,959	7.55
Ditto by mere tenants-at-will	...	...	...	...	57,419	21.70
Total					264,509	100.00
Total cultivation by occupancy tenants	...	...	...	...	131,303	
Ditto by tenants-at-will	...	...	...	...	79,471	

Nearly four-fifths of the cultivated area of the tract are in this way occupied by cultivators who have a more or less permanent interest in the land, for it is obvious that an occupancy tenant cultivating additional land as a mere tenant-at-will is ordinarily a more trustworthy occupant of the land and payer of the rent of it than a mere tenant-at-will would be.

The proportion of land held by tenants-at-will is largest in Muzaffarnagar, in which pargana there has been more litigation than in any other on the subject of

occupancy right; but it is likely that, even independently of this, the proportion of this class would have been very considerable, as it is in other sandy parganas in which there are few cultivating proprietors.

Occupancy right in
revenue free-estates.

38. The proportion of land held by occupancy tenants is greatly less in the revenue-free estates, and there is frequently extreme harshness of management in these villages. Indeed, there can be little question that frequent revisions of settlement are favourable to tenant right, and that revenue-free tenure does not conduce to the considerate treatment of the cultivating classes. In fact the history of this as well as other districts proves that the most substantial rights on the part of tenants are to be found in those neighbourhoods in which the Government demand pressed most heavily, and that the less burdensome assessments become, the more landlords disregard the claims of their tenants, and the more they are inclined to rack-rent them. The pressure of the Government demand makes union on the part of those who are affected by it desirable, if not absolutely necessary. When the common danger is removed or modified dissensions begin; the landlord does not require to be conciliatory, and his chief aim comes to be the destruction of all rights but his own, and the further increase of an income which has been materially enhanced by the consideration of Government. An absolutely ruinous assessment ruins the cultivator as well as the landlord, but light assessments in no way secure similar consideration for the cultivator, and high assessments for long terms or in permanence, by freeing the landlord from Government interference, enable him, unchecked by the fear of immediate consequences, to press hardly on his tenantry.

Tenures

39. There are no peculiarities in the proprietary tenures of this district, and the accompanying statement shows the number of estates in each pargana and in the whole tract held under the zamindari, pattidari, and imperfect pattidari tenures.

Statement showing the tenures on which estates are held in the six parganas, the assessment of which has been revised.

No.	Pargana.	Zamindari.		Perfect pattidari.	Imperfect pattidari.	Total.
		Owned by single family.	Owned by a number of co-sharers.			
1	Purchapur ...	9	4	1	48	67
	Ditto muafi ...	...	...	...	2	2
	Total ...	9	4	1	48	69
2	Muzaffarnagar ...	11	9	5	43	67
	Ditto muafi ...	1	1	...	4	6
	Total ...	12	10	5	46	73
3	Bhukarberi ...	5	18	3	27	53
	Ditto muafi ...	1	...	1	...	1
	Total ...	6	18	4	27	54
4	Jauli Jananth ...	21	5	10	36	71
5	Khatauli ...	35	20	9	33	97
	Ditto muafi ...	4	...	...	3	7
	Total ...	39	20	9	36	104
6	Bhumah Sambalherah ...	15	17	9	16	59
	Total of assessed villages ...	96	73	37	198	404
	Total of muafi ...	5	1	1	9	16
GRAND TOTAL ...		101	74	38	207	420

Of zamindari villages the majority are owned by single individuals or by small families, the descendants of a common grandfather not tracing their relationships to descent from a remote ancestor. In Muzaffarnagar as elsewhere in the neighbourhood, the bigha, not the rupee, is the unit by which shares are ordinarily calculated; but here even more than elsewhere the tendency is strong towards the acquisition of

separate possession, and although maháls have not as yet been greatly multiplied, informal and imperfect partitions have been generally effected.

40. In Púrchapár the older communities have in former times shown themselves to be by no means wanting in strength and cohesion, but with the extreme pressure of the Government revenue and all danger from without, the urgent necessity for union has passed away, and most village communities, whether proprietary or merely cultivating, are less united than is desirable, and are almost entirely devoid of that submissiveness to the village elders which is to be seen in other less prosperous districts occupied more generally by the less industrious castes.

Want of union and discipline in village communities.

In Ját villages more especially there is often a total want of village discipline, and there is so much jealousy and dissension that little could be done through the people themselves, and in the distribution of the jama and such like arrangements, the intervention of the settlement officer was very frequently required. Occasionally an emergency arises of sufficiently general interest to unite the community, but ordinarily there is little cohesion and no village discipline, and there is a great deal of trespass and petty pilfering which would not be allowed for a moment if the lambar-dars had the authority which they once had, and which they still retain in some districts.

41. There were two classes of tenants recorded in the papers of Mr. Thornton's settlements whose rights gave rise to some discussion, and whose history is worthy of being recorded.

Peculiar classes of tenants; the "sharah naqdi" villages.

In 21 estates in this tract, and in some others beyond its limits, Mr. Thornton restricted the rights of the proprietors to the receipt of a fixed proportion, usually 18 per cent. of the Government demand. The tenants, on the other hand, were invested through the mukaddams with full control over the estate, the village site, ponds, barren land, culturable waste, and trees on the uncultivated land. The mukaddams managed the estate, and the proprietors, chiefly Sayyids, were reduced to the position of mere recipients of malikana.

It is clear that Mr. Thornton selected for these special privileges cultivating communities remarkable for their strength and antiquity, but it is also clear that many equally old and strong communities were, it may be for their own fault, passed over; and in most cases where the old records have survived it has been ascertained that these selected communities had not previously enjoyed any special privileges. The tenants paid crop and kind rents quite as high as was usual in the neighbourhood, and although according to the unquestionable custom of the country the tenants were allowed to plant groves, and may possibly have been permitted to sink wells, they certainly had not complete control over the uncultivated land, and their rents followed the general usage, and bore no fixed proportion to the Government demand.

During the period of more than 20 years during which this arrangement was maintained, the "sharah naqdi" villages flourished to an extent which in some measure justified Mr. Thornton's interference with the position of the proprietors. These villages were far above the average, prosperous and contented; the tenant, secure of his holding, steadily improved it: and even now, when the introduction of canal irrigation has gone far to equalize estates and to render much of the expenditure by tenants of little advantage, and when litigation and ouster have brought distress and ruin to not a few of the inhabitants, the old 18 per cent. estates still surpass most of their neighbours.

42. At the recent settlement, however, on a short demi-official reference, it was ruled that the arrangement made by Mr. Thornton was "altogether unauthorized and could not be maintained." The tenants were reduced to the position of ordinary occupancy tenants, and as the administration paper was held to be a matter which concerned Government and the landlords alone, the latter had the opportunity of legislating for their tenants, who remained for a time ignorant of the full change

Changes made in the constitution of the "sharah naqdi" villages.

which had taken place. Later, tenants planting trees in accordance most probably with ancient custom, and unquestionably in accordance with the village constitution for more than 20 years, were ruthlessly ousted from their holdings, and it was at length discovered that the only vestige of their ancient position which the landlord made law of the *wajib-ul-arz* had left them, was that the *mukaddams* were still held responsible for criminal offences committed within the village boundaries.

The history of these villages is a not unfair example of the injury that has been done by violent changes in the policy of our revenue administration, and in the last years as in the first of our rule there has been evinced the same tendency to rush to extremes and the same unwillingness to allow calm investigation to precede decided changes. There seems to be no doubt that in the settlement of most of these villages Mr. Thornton went much further than any evidence warranted. The cultivating communities were no doubt strong and long established; it is unquestionable that the tenants planted groves, and it is probable that they sank wells, but it is absolutely certain that they paid full rents to the landlords: and there is nothing in the papers of the previous settlements, where they survived, to show that the tenants ever exercised any control over the waste land. The arrangement, no doubt, worked admirably, but more moderate interference would in all probability have done as much for the tenants without injuring or alarming the landlords. And the extreme measure of one settlement was followed by an equally extreme measure at the next revision. It was assumed without any sufficient investigation that tenants who had for generations exercised certain rights, and who for more than 20 years exercised full control over the whole of the village lands, ought to have no rights except the barest privileges of occupancy tenants. That much perverted document, the administration paper, was made the vehicle for class legislation, and was accepted without question by all the courts, civil, revenue and criminal; and everything that could well be done was done to ruin the most prosperous villages and the most meritorious tenants in the district.

Procedure at present
revision.

43. When the new administration papers were drawn up it was impossible to obtain the signatures of both parties to the obnoxious classes, and eventually the landlords admitted the right of the tenants to some of their old privileges and were satisfied to yield to the tenants the fullest control over the land for which they paid rent, and to obtain possession of the waste land for which rent was not paid, and an equitable rent-roll.

Tenants holding at
owners' rates.

44. The second class of privileged tenants had their origin not in the views of official theorizers, but was traceable to hereditary claims of kindred with actual proprietors, to the compromise of old disputes, or to a share formerly undertaken in the responsibilities of the proprietary body. Here, too, the proceedings of the settlement of 1863 had increased the difficulty of arriving at a satisfactory solution of the question at issue. It had been promptly assumed that persons paying owners' rates must necessarily be proprietors, and the occupants of these lands were accordingly entered as proprietors. The civil courts, however, took a different view of the question and the entries had to be changed, and the question of rent was postponed until the pending question of permanent settlement or the revision of that recently concluded should be settled.

The origin of these rent-rates was ordinarily one of three :—

(1.) When proprietary rights were conferred in the early years of our administration on cultivating communities, some members of a brotherhood had declined to accept the share that would have fallen to them in the management of the village, and continued to hold as cultivators, paying by reason of their connection with the proprietary body the same rates as owners.

(2.) Ex-proprietors who had sold their shares ordinarily to members of the brotherhood had been allowed to cultivate their seer lands on the condition of the payment of the revenue due from the fields in their possession.

(3.) In the old days, when the land was dry and the assessments were severe, the proprietary communities were glad to associate with themselves tenants, whether of their own or other castes, who, in consideration of the help they gave in bad years, were allowed to hold their fields on the same terms as the proprietors themselves.

The first and third classes of these privileged tenants are met with at all frequently in pargana Pūrchapār alone, but there were several instances of the second class in the large Jāt township of Bhūkarheri. Sayyid ownership had left no room for such rights, and anomalies lasted longest in the pargana which had come last under our revenue administration, and in which village communities most generally retained proprietary rights.

45. There was some difficulty in deciding what terms were suitable for such persons paying khewat rates. It had been ruled, and the ruling had been accepted, that payers of revenue rates were not necessarily owners, and under the rent law then in force there was no status between that of the proprietor and that of the occupancy tenant. Where feeling had been embittered by litigation, the landlord naturally contended that a tenant who had rewarded past consideration by a claim to proprietary right could hardly now hope for better terms than the law gave him. But in many villages there had been no litigation: the decision regarding Bhūkarheri was accepted in Pūrchapār, and the proprietors were anxious to secure fair rents, not to press unduly upon old tenants. And an explanation of the terms which were likely to be granted to ex-proprietary tenants by the new revenue law bill farther helped the parties to a satisfactory settlement of the rent question, and eventually a privileged rent-rate, ordinarily of 13 annas in the rupee of the rates charged to occupancy tenants, was accepted in several villages. In such cases a fair precedent has enormous influence, and the terms which were readily assented to by landlords and tenants who were at peace among themselves, were gradually extended to the townships in which there had been the most angry litigation.

The terms eventually secured to tenants paying khewat rates.

Ex-proprietary rates were obviously suitable to persons who had lost proprietary rights or who had refused to accept proprietary responsibilities; and tenants, on the other hand, who in times of need had borne with the proprietors the burden of severe assessments, had claims to ex-proprietary privileges which a community of cultivating proprietors was not unwilling to acknowledge. Before the land revenue law bill passed into Act XIX. of 1873 some of its most important provisions had been weakened or left out, and by waiting the landlords might have got more than they succeeded in obtaining. On the other hand, they obtained in many cases higher rents than they had ever levied, and in all higher rents than had been paid to them for years, and it is likely that they got as much as in equity they had any ground to look for.

46. The people of the Ganges canal tract of Muzaffarnagar are on the whole distinctly prosperous, and where they are not so, the absence of prosperity is owing to the character of the people rather than to any want of opportunity of earning a certain and sufficient livelihood. The population is not more than sufficient for the wants of the country. The Ganges canal has not only insured the land against frequently recurring droughts, but it has enormously extended the growth of the best crops: and in nearly every village there is now that variety of crop, and especially that extent of sugarcane which is such a support not only to the agriculturist proper, but to that large labouring class on the prosperity of which the prosperity of the cultivator so much depends. In certain dry ill-watered parts of the country the labouring classes are seldom thoroughly well off, because among other reasons there are periods of agricultural idleness. In this tract there is no such period; even before the first fall of rain the rice cultivation has begun, and as soon as the late harvest of the upper doab is over the rice crop has to be thought of. All through the rains there is never-ceasing work: land has to be ploughed and the remaining rain crops sown; then there is the ploughing for the rabi, and eventually the kharif harvest and the rabi sowings.

General condition of the people. Sufficiency and constancy of agricultural employment.

coming together give as much work as can be managed by the whole population. Hardly has the kharif crop been harvested when the cane harvest begins, and if the work at the sugar mills is delayed or interrupted by rain, the cotton, urd, or maize fields are ploughed up: and any labour that can be spared of men or cattle is welcome in the fields, for the land has to be prepared for the cane sowing and much laborious ploughing has to be gone through.

If there is any leisure in the year it is in the month of March, when the cane sowing is generally over and the spring crops are hardly ripe; but the interval is a short one, for barley ripens comparatively early, and in April the wheat and gram harvest begins. The work of harvesting and preparing for the market the spring crops affords full occupation until the ploughing for rice begins.

There are in the year three harvests—that of the ordinary kharif crops, the sugar-cane harvest, and that of the spring crops, and all three furnish general and remunerative employment to the great mass of the labouring population. The labouring class in this tract, therefore, has the advantage of continuous employment throughout the year, and of peculiarly profitable employment at short intervals; and they are not exposed to the loss, distress, and danger caused by droughts. As to the landowning and cultivating population, even before the introduction of canal irrigation the prosperity of these classes was marked, wherever their own industry and the assessments admitted of it. And even where irrigation has not penetrated, there are enough communities both of proprietors and cultivators to show that, without irrigation of any kind, energy and thrift can in this district render people fairly secure, even when their land is wholly dependent on the seasons. But canal irrigation has extended the prosperity of the best cultivating castes to those who are less industrious, and a moderate amount of labour and thrift are now sufficient to secure that prosperity which was in former days within the reach of the most industrious alone. The generally comfortable circumstances of the people are shown by the goodness of their clothing and of their food. The labourer in Muzaffarnagar dresses better than the average petty proprietor of the eastern districts, and wheat now forms a much larger proportion than of old of the food of the poorest classes.

Indebtedness.

47. But greatly as the agricultural community has prospered in late years, it is very questionable whether their indebtedness is any less than of old—indeed, it would seem to have increased; and just as ordinarily the proprietary community owes more money than the cultivating community of the same caste close by, so the increased credit due to recent agricultural prosperity has admitted of increased borrowing and has encouraged more than the old recklessness in expenditure. If the people are asked how they come to owe more when they are no longer liable to losses from drought, and when their profits are both larger and more assured, they will inevitably trace their indebtedness to failure of crops, the untrustworthiness of the canal supply, the dearth of cattle, or other cause. But there can be no doubt that the extravagance of the people has more than kept pace with their increasing prosperity, and the reckless expenditure incurred in the celebration of weddings is, in my opinion, a very serious cause of the increasing indebtedness of the people even in the most prosperous villages.

The poorest class, the landless Sayyids.

48. The poorest class in many respects of the community is formed by the broken-down Sayyid families. They or their fathers have squandered their ancestral property, and the representatives of some of the oldest and most powerful Sayyid houses now subsist by cultivation, for which employment they are but ill-suited, or by serving as chapprais or mazkuris. But no amount of agricultural prosperity can be of much use to a class which is proverbially reckless as long as any portion of the ancestral property is retained, and is proverbially wanting in agricultural industry, when the career of extravagance has ended in inevitable ruin.

Rates of interest.

49. Indebtedness may keep pace with prosperity, but the improved credit of both proprietor and cultivator is proved by the lower rates of interest which are now

charged. Small sums can now be borrowed by proprietors at from 12 to 18 per cent. per annum, and cultivators of good character can obtain loans at 15 to 24 per cent. These rates are still high, but are much lower than those formerly charged, and than those prevailing in less prosperous districts.

50. Besides that of sugar, which is practically an agricultural operation, the only manufacture of any importance is that of blankets, which are well known for their excellence. Country cloth is of course manufactured to some extent, but less than formerly, and English goods are coming more and more into use.

Manufactures.

51. The exports of the district in general, and of this portion of it in particular are almost entirely of agricultural produce. Blankets, which form the sole manufacture of any importance, are sent out of the district to a great extent for use in Government departments, but by far the most important and constant exports are those of grain and sugar. The course of the trade in grain is ordinarily eastward, while that in sugar is to the south and west, and in both directions the construction of railways has rendered fresh markets available for the produce of the district. In former days Bhawani in Hissar was the great mart to which the bulk of the sugar was exported, and both from the Panjáb and Rajputana markets return cargoes of salt, the chief import, were and are still received. It is estimated that six lakhs of maunds of grain and about the same amount of sugar is available for export each year. The surplus quantity of cotton produced is comparatively small, and the yield of oil-seeds is in sufficient for the wants of the district.

Trade.

52. There is nothing in the system of agriculture in this district that is exceptional, but several changes have been introduced here as elsewhere owing to canal irrigation, and in part on account of the consequently increased value of land. In no respect has the change been greater than in the cultivation of sugarcane. Before the opening of the canal the great bulk of this crop was sown on unirrigated land, and special efforts had to be made to facilitate the thorough saturation of the soil by rain and the retention of the moisture. When, as was ordinarily the case, the field prepared for cane had been under a kharif crop, the land was ploughed in time to obtain full advantage from the cold-weather rains; it was ploughed again after them, again before the rains, at intervals during the rains and then through the cold weather up to the time of sowing between the middle of February and the middle of March. In this way land was ploughed 15 to 20 times, and each ploughing was followed by the use of the *merah* or clod crusher, or in the case of firmer soil by the *lakar* or roller. The fact that so much ploughing had to be gone through when the soil was more or less dry, and that the most thoroughly pulverized soil protected the concealed moisture most efficiently from the sun's rays, was probably the chief reason why more or less sandy land was generally selected for the growth of unirrigated cane.

System of agriculture.

53. The great bulk of the cane crop now-a-days, to a far greater extent indeed than the crop statement indicates, follows immediately after a kharif crop. This is called *bastua* east of the West Káli, and *datoe* to the west of the river, and also on its eastern bank, in opposition to *báhan* and *pándrah* respectively, expressions applied to sugarcane sown after fallow. But the word *datoe* is now no longer specially applicable to a crop which follows not only on *juár* and Indian-corn; and in many villages much greater detail is entered into, and the cane crop is called *urdín*, *biraund*, *munjia*, *dhánkar*, and *datoe*, according as it follows *urd*, cotton (*bári*), *múnji*, *dhán*, or one of the crops with thick stalks, Indian-corn or *juár*.

Change in sugarcane cultivation caused by the canal.

In the *khassas* sugarcane is recorded as occupying 18,520 acres, and 2,731 acres were entered as ploughed after crop for the cane crop of the next season. But entries of this kind are always defective; in villages taken up early in the season the kharif crop was still on the ground, and at best second crops are frequently omitted, and still more is the entry of ploughing for next season's sugarcane likely to be neglected. The land ploughed throughout the year for sugarcane is on the other hand more likely to be accurately entered, and is liable to be over rather than under-stated owing to

the neglect or omission to enter the kharif crops which may have occupied the field before it was ploughed up, and the area so recorded (4,952 acres) is almost certainly a sufficient statement of the land devoted to sugarcane after fallow.

In this way, of the sugarcane crop formerly almost invariably grown after fallow, only one-fourth is now sown in land which has rested, while three-fourths follow immediately upon a rain crop. For cane cultivated in this manner in irrigated land 10 to 12 ploughings are sufficient, so that if the area under this crop is greatly more extensive than of old, the average amount of labour devoted to each acre of cane-land is distinctly less, unless, indeed, the increased quantity of the average crop restores the balance by furnishing a greater weight of cane to be pressed.

With the general change in the method of cane cultivation a less general change in the kind of cane grown has taken place. At last settlement the small thin cane (daulhu) was all but universal; now, more especially in the southern parganas, it has been very generally superseded by the larger Meerut cane generally called gagaul.

Rice cultivation.

54. Facility of irrigation has even more completely changed the character of the rice cultivation in the Ganges canal tract. Throughout this portion of the district, the area devoted to rice amounted most probably to nearly 4 per cent. of that under the plough. This area has now been more than doubled, and what is even of more consequence, the kind of rice and the manner of its cultivation have both been greatly changed. Before the opening of the canal, rice was ordinarily unirrigated, and, except in the khádir, rice grown was almost invariably of the less valuable variety. The great bulk of the crop consisted of dhán, the coarser rice, still grown to the extent of about one-third of the whole crop. A finer rice, a variety of múnji named naora, was also grown to some extent. When canal water had changed the circumstances of the country a variety of múnji called biramohári was introduced, it is said by a faqir from the Dún, into one of the best rice villages in the district. Succeeding in Makhiali of pargana Muzaffarnagar, its cultivation spread, but the rice was found to deteriorate, and eventually the Ramjiwan múnji gradually superseded it, and is now almost the only rice sown in irrigated land on this side of the district. This rice is distinct from the chahora of the Eastern Jumna canal tract, and is invariably sown broadcast, while the other, as its name indicates, is transplanted from a nursery. The difference in the method of cultivation is probably as much owing to a want of population in the Ganges canal tract as to any other cause.

Notwithstanding repeated and more or less successful experiments, Carolina rice has hitherto failed to commend itself to the people. There is no doubt that with care and plenty of water it can be made to yield a large crop, but it seems equally certain that the same amount of trouble and expense devoted to the Ramjiwan variety brings still larger returns. Some experiments tend to show that Carolina rice can stand flooding better than other varieties, and if this be confirmed, it may prove useful in the Ganges valley. It seems likely, however, that on the upland the Ramjiwan múnji, originally introduced by a Government department, will hold its own against its recent rival.

Twice-cropped land.

55. Intimately connected with the extension and improvement of rice cultivation is the increase in the area of twice-cropped land. At last settlement the proportion of this land throughout the district amounted, exclusive of that in which sugarcane was grown after crop, to $3\frac{1}{2}$ per cent., and it is practically certain that the average of the tract under review was in this respect distinctly less than that of the district at large. The percentage is now 5, and it may be assumed that the area of twice-cropped land has at least doubled. Indeed, I have little doubt that, owing to a variety of causes, the twice-cropped area, as well as that sown with cane after crop, has been largely under-stated.

But, even assuming the twice-cropped area to be fully entered, the extent of land ploughed for sugarcane after crop is obviously under-stated, and must be sufficient

with the help of the more fully stated area of land ploughed for sugarcane after fallow, to provide for the not excessive area of cane recorded in the khasrahs. The requisite addition to the acreage ploughed for cane after crop would bring up the extent of land cultivated without a rest to nearly 10 per cent. of the whole area under cultivation and to about 20 per cent. of the whole area under irrigation. But as a matter of fact the twice cropped area is almost certainly under-stated, and the proportion of land sown immediately after a crop must be considerably greater even than this largely corrected estimate.

56. The subjoined statements give the average ascertained produce per acre of the various crops throughout the tract, and that estimated by selected zemindars and patwáris of distinctly good villages. The persons whom I consulted were five in number—three zemindars and two patwáris. Of the former, one was a cultivating Ját, the second a Rájput of position, the third estimate was that of a Taga brotherhood. Of the patwáris, one was the village accountant of an estate long under my immediate management, and his statement represents the opinions of the Sayyid owners of the remaining share and of the Ját cultivators as well as of the patwári himself, a sharer in a larger Sheikh township close by. The second patwári was selected for his trustworthiness and intelligence.

Produce per acre in pounds of the principal crops as ascertained by experiment.

Circle.	Soil.	Sugar-cane.	Cotton.	Munji.	Dhán.	Makki.	Juar.	Urd.	Bajra.	Moth.	Mung.	Gowar.	Wheat.	Gram.	Barley.
I.	Wet loam	3,299	273	1,654	1,553	787	592	815	...	...	...	...	1,582	1,702	1,351
	Wet sandy loam	2,690	307	1,095	1,250	507	417	898	...	...	...	...	1,052	1,648	1,258
	Dry loam	...	83	...	1,400	665	945	770	434	...	...	...	1,095	1,326	995
	Dry sandy loam	1,046	...	...	932	...	652	388	467	374	594	932	796	1,121	669
	Bhúr	...	...	...	...	...	466	...	638	527	449	800	344	416	466
II.	Wet loam	2,785	274	1,294	1,272	511	533	1,046	...	...	...	...	1,359	1,233	1,106
	Wet sandy loam	1,992	158	1,024	1,108	562	...	826	...	...	...	...	984	1,428	941
	Dry loam	...	...	708	819	615	704	680	200	...	...	...	790	969	1,081
	Dry sandy loam	...	...	684	585	367	467	701	481	324	495	720	799	957	863
	Bhúr	...	...	...	...	...	...	...	510	379	358	702	499	784	564
III.	Wet loam	3,025	300	1,138	1,044	320	...	...	...	...	...	...	800	907	748
	Wet sandy loam	1,942	92	834	655	328	...	606	...	...	...	...	603	889	539
	Dry loam	2,600	222	...	666	600	553	718	...	...	...	...	766	538	632
	Dry sandy loam	...	...	...	400	466	349	626	366	400	633	666	390	590	554
	Bhúr	...	...	...	...	...	154	...	452	266	266	644	266	467	565
Average for each soil.	Wet loam	3,036	249	1,369	1,289	539	562	940	...	...	...	...	1,247	1,280	1,035
	Wet sandy loam	2,208	152	784	1,004	472	417	777	...	...	...	...	879	1,322	913
	Dry loam	2,600	102	708	962	626	727	723	317	...	...	...	884	944	903
	Dry sandy loam	1,046	...	684	639	271	489	575	43	368	544	773	662	889	696
	Bhúr	...	...	...	...	...	310	...	533	377	357	715	366	555	532
General average		3,422	188	1,052	973	522	528	736	442	378	450	744	807	998	822

Produce as estimated by zemindars, cultivators, and patwáris in selected good villages.

	Sugar-cane.	Cotton.	Dhán.	Munji.	Makki.	Juar.	Urd.	Bajra.	Moth.	Mung.	Wheat.	Gram.	Barley.
Bhúkarheri	2,666	333	1,600	2,000	600	600	836	668	800	668	1,332	1,978	1,000
Belrah, pargana Bhúkarheri.	2,666	178	2,132	2,132	700	798	668	400	298	532	1,301	1,801	800
Jasaulah, pargana Khatauli.	2,666	178	1,600	1,668	1,002	800	668	668	600	668	1,332	1,382	1,066
Chalsinah, pargana Khatauli.	3,200	178	1,332	...	801	400	533	400	533	266	1,600	800	1,600
Kharkheri, pargana Púr-chapár.	2,400	266	1,300	1,600	...	600	668	668	...	...	1,332	...	1,332
Average	2,719	226	1,593	1,850	776	639	674	561	558	534	1,359	1,496	1,159

Notwithstanding the want of uniformity in the figures, it is so far satisfactory to find that the highest ascertained produce is equalled by the estimate from one or other of the five villages, and estimates are often given largely in excess of any of those which have been recorded.

57. My estimates for the rabi grains are on the whole slightly higher than those given by Mr. Thornton in the appendix No. III. to his report, and it is well that

Comparison of new and old statistics.

I should remark here that the average of his estimates is of no use for comparison with other districts, unless the proportion of dry and sandy land is similar. When the average of irrigated land, the average of dry land, and the produce of bhūr are stated separately, it is found that the discrepancies between Mr. Thornton's estimates and those for other districts are not, when allowance is made for the large proportion of unirrigated and sandy land, so great as has been supposed.

Appendix No. III. of Mr. Thornton's Settlement Report.

Denomination of soils.	Wheat			Barley.			Gram.		
	Number of acres of which the kankut was made.	Average rate of the whole produce per acre in maunds and seers.	Average rate of the whole produce per acre in lb avoirdupois and decimals.	Number of acres of which the kankut was made.	Average rate of the whole produce per acre in maunds and seers.	Average rate of the whole produce per acre in lb avoirdupois and decimals.	Number of acres of which the kankut was made.	Average rate of the whole produce per acre in maunds and seers.	Average rate of the whole produce per acre in lb avoirdupois and decimals.
Misan irrigated, ...	1,017	14 37½	1,321·325	50	13 35½	1,324·575	9	9 39½	882·910
Do. unirrigated ...	523	10 18½	925·480	16	9 20½	841·446	211	9 18½	836·470
Rouali irrigated, ...	461	11 21½	1,021·124	23	8 39	793·901	16	9 4½	806·615
Do. unirrigated, ...	6,719	8 19	749·6·3	328	9 8	813·804	1,312	7 4½	639·701
Dákar irrigated ...	29	10 13½	914·475	2	8 8½	727·004	...	...	...
Do. unirrigated ...	264	8 28½	769·961	30	7 30	685·541	289	5 35½	520·790
Bhūr ...	2,391	6 33½	605·376	570	10 23	935·432	398	6 13½	560·585
Total ...	11,404	10 7	901·46	1,019	10 6	897·838	2,135	7 2½	624·726
Value at average prices of average produce per acre.	...	Rs. a. p. 11 0 0	...	...	Rs. a. p. 7 7 ½	...	...	Rs. a. p. 6 11 0	...

Distribution of crops.

58. This distribution of crops is shown in full detail later on in this report, but the following abstract is given here :—

Crops.	Assessed land.		Revenue-free land.		Total cultivation.	
	Area in acres.	Percentage.	Area in acres.	Percentage.	Area in acres.	Percentage.
Sugarcane ...	16,762	6½	1,758	8½	18,520	6½
Cotton ...	9,391	3½	797	4	10,188	3½
Múnji or fine rice ...	10,383	4	1,050	5½	11,433	4
Dhán or coarse rice ...	7,236	2½	608	3	7,844	2½
Maki or Indian-corn ...	2,119	½	243	1½	2,362	½
Juár ...	3,529	1½	249	1½	3,778	1½
Chari ...	19,264	7½	1,570	7½	20,834	7½
Gowar ...	2,671	1	299	1½	2,970	1
Urd ...	23,567	8½	1,997	10	25,564	9
Múng ...	884	½	184	1	1,068	½
Moth ...	15,541	5½	853	4	16,394	5½
Bájra ...	33,882	12½	1,198	5½	35,080	12½
Indigo ...	33	...	74	½	107	...
Other kharif crops ...	2,140	½	90	½	2,230	½
Ploughed for sugarcane ...	4,593	1½	359	1½	4,952	1½
	151,995	57½	11,329	56	163,324	57½
Wheat ...	68,999	26½	7,369	36½	76,368	20
Gram ...	8,992	3½	464	2½	9,456	3½
Barley ...	18,272	7	402	2	18,674	6½
Wheat and gram ...	1,010	½	67	½	1,077	½
Wheat and barley ...	10,877	4½	826	1½	11,203	4
Peas ...	1,170	½	89	½	1,259	½
Bejar or mixed crops ...	282	...	8	...	290	½
Masúr ...	75	...	8	...	83	...
Other rabi crops ...	934	½	87	½	1,021	½
Ploughed, but not sown ...	730	½	18	½	748	½
	1,11,341	42½	8,831	43½	120,172	42½
Vegetables ...	166	...	49	½	215	...
Tobacco ...	82	...	3	...	85	...
Poppy ...	14	...	...	...	14	...
Other garden crops ...	399	½	32	½	431	...
	661	½	84	½	745	½
Total cultivation ...	263,997	100	20,244	100	284,241	100
Dofasli ...	12,341	5	1,483	7½	13,824	5

59. The percentages of the best crops are somewhat better in the revenue-free land, but the revenue-free area is also on the whole superior in soil to that which is assessed, and there is only a small margin which can have been affected by the substitution of worse for better crops on account of settlement. The statement is fairly trustworthy, although in this district as elsewhere the earlier kharif crops, such as Indian-corn and rice, which are cut before field operations are well begun and are replaced by second crops, have probably been under-stated. The area under cane has also been affected to a certain extent by the high prices prevailing for grain during the progress of settlement operations, and the consequent tendency to devote to cereals land which under other circumstances might have been sown with sugarcane.

Remarks on above statement.

The areas under the poorest crops, especially distinctive of bad soil, bájra and moth in the rains and barley in the cold weather, are, when the extent of sand is considered, very small, and go to prove that careful cultivation has extended to much of the poorest land in the tract.

The smallness of the juár crop and the now restricted area of waste necessitate the devotion of much land to the fodder crops, chari (or juár sown thick) and gowar. Arhar is one of the least important crops in the district and is rarely seen except in the southern parganas, and even in them the return is very precarious, as the plant is liable to destruction by frost.

60. The chief agricultural features of the tract which need be noticed here, in advance of the greater details given further on, are —

Chief agricultural features of the tract.

(1) The unusually large percentages of sugarcane, rice, and wheat, notwithstanding the extent of poor soil.

(2) The almost complete absence owing to the climate of indigo and arhar.

(3) The smallness of the juár crop and the consequently considerable area devoted to fodder crops.

In many districts in these provinces an increase in the percentage of the rabi crops is looked upon as a sure sign of agricultural progress. In this district improved cultivation and increased facilities for irrigation have had a contrary effect, and in some of the best villages in the tract the extended cultivation of cane, rice, and fodder crops have left little room for wheat. The balance is somewhat redressed by the second crops, chiefly gram, but even with this addition the proportion of the rabi to the kharif has diminished rather than increased.

With correction for twice-cropped land, the proportions of the different crops are as follows:—

Crops.							Proportions.
Kharif	{	Sugar-cane	...	...	...	...	6
		Cotton	...	...	...	...	3½
		Múnji or finer rice	...	...	...	...	4
		Dhán	...	...	...	...	2½
		Makki	...	...	...	...	½
		Juár	...	...	...	...	1½
		Chari	...	...	...	...	7
		Gowar	...	...	...	...	1
		Urd	...	...	...	...	9
		Múng	...	...	...	...	½
		Moth	...	...	...	...	5½
Bájra	...	...	...	...	12		
	{	Other crops	...	...	...	...	½
Total kharif						...	54
Rabi	{	Wheat	...	...	...	...	26
		Gram	...	...	...	...	6½
		Barley	...	...	...	...	6½
		Wheat and barley	...	...	...	...	3½
		Peas	...	...	...	...	1
		Other rabi crops	...	...	...	...	1
Total rabi						...	44
Second crops		...	...	...	...	2	
Grand total						...	100

CHAPTER II.

GENERAL AND FISCAL HISTORY.

General History.

Limits of proposed sketch.

In a report of this kind it is needless to go into more historical details than are necessary to throw light upon the present condition of this portion of the district, its tenures, and the character of its population.

Early inhabitants.

2. It would seem that before the Ját immigration the tract was occupied by Rájputs, with a sprinkling of Brahman and Taga settlements. The wave of Ját invasion seems to have been strong enough to obliterate to the south almost every trace of Rájput and Taga ownership, and although the Játs did not settle in the eastern portion of the district in compact bodies as they did farther west, they were strong enough to drive out or to obliterate the people who possessed the land before them, and almost without exception Rájputs and Tagas are to be found as independent communities in the southern portion of the tract at least, in the poorer lands near rivers, to which they may have been driven when the immigration began, or to which they may have returned or migrated when its first force was spent. But even to the south of the tract the Ját immigration was in no way so strong and compact as farther to the south and west, and it seems to have spent its force before it reached the north, or it may have been that a country so dry and sandy offered few attractions and was suffered to lie waste, as no doubt was the case with the sandier tracts. In Púr Chapár accordingly we find extensive Taga settlements which make no boast of pre-historical occupation, but date their arrival not earlier than the eleventh century, and in the name of their tribe, Bíkwan, preserve the memory of the country, Bikanír, from which they migrated. Side by side with these Tagas are Gújars, who seem to have appropriated generally the lands which the Játs did not occupy, and scattered colonies of Játs, chiefly of the less honourable division, and some of them quite recently established.

Settlement of the Sayyids of the Barna.

3. Before the Muhammadan invasion, as after it, the portion of the Muzaffarnagar district lying between the Ganges and the West Káli was immediately subordinate to the central authority at Delhi. There were few local chiefs, and fewer still of any note; nor does the Muhammadan conquest seem to have made much outward difference at first in the condition of the people. For although the district was frequently traversed by Muhammadan armies, no Muhammadan settlements of any importance seem to have been made until the arrival of the Sayyids, and names like Tughlakpúr and Fíruzpur seem merely to indicate incidents in the campaigns of the Pathán monarchs, and if they commemorate any occupation, that occupation was by the ruling power for strategic purposes, and not the settlement of Muhammadan residents.

Dates of the Sayyids' immigration

The Sayyids of the Bárha, who did so much under the empire to confer distinction on the neighbourhood, are stated by tradition to have settled in the district seven generations before the time of Akbar. They, like the Sayyids of Bilgrám, trace their descent to Sayyid Abul Fera, four of whose sons settled in the Panjáb in towns which are now in the Patiála territory—Kundli, Chatbanúr, Tihānpur, and Jajner. Tradition makes the four sons migrate still further eastward into this district; but here tradition and genealogies are in antagonism with history, and it seems much more likely that the Sayyids settled down in the Patiála villages until a time came when either the old lands proved too small for the increasing clans, or the fact of some of the members being in the service of the Delhi monarchs made a residence nearer to the capital desirable. Nor is there any sufficient ground for the assertion that the representatives of the four clans came together, or that a single representative of each settled in this district. The oldest inscription that has been discovered on a tomb at Sambalherah seems to have been unknown even to the Sayyids of the same clan who have written regarding the history of their ancestors, and who in their genealogical tables place at the same distance from the renowned Abul Fera the Salár Aulia of

Sambalherah, who died in 1375 A.D.,* in the reign of Fīroz Shāh, and the stout old soldier Sayyid Muḥmūd, who served under Akbar.

But whatever discrepancies there may be in the various traditions, and however antagonistic some may be to ascertained history, it seems likely that representatives of the four khāps or clans of the Sayyids of the Bárha settled in this district about the same time, and that the first settlement of the Kundliwāls was in Majherah, of the Tahānpuris in Dhāsri and Kamherah, of the Chatraoris in or near Sambalherah, and of the Jajneris in Palri. With the exception of the last named village, all the earliest Sayyid settlements were made in the sandy tract of the old Sambalherah pargana and in its immediate neighbourhood, and it was not until later that the Sayyids obtained a footing in the richer portions of the district. And even tradition allows that the earlier acquisitions were made through the good will of Hindu owners, whom the Sayyids placed in various ways under obligation.

The earliest Sayyid settlements.

This tends to show that the fertile portions of the district were then fully occupied, and that the Sayyids came into the district anxious for a settlement within an easy distance of the capital, but not yet holding such high offices at court as would enable them to obtain possession of fertile townships already settled. And this view is confirmed by the fact that a family of Gurdezi Sayyids, who are allowed to have come into the district before the Sayyids of the Bárha, settled on the edge of the same wilderness of sand, but nearer the better land, and close to old Jāt and Rājput settlements. The immediate neighbourhood of their co-religionists would be an additional inducement to the new comers to occupy the land nearest to them which could be obtained.

As times passed on, the Sayyids gradually pushed their way into the surrounding country, and later their distinguished services to the State brought them very substantial rewards, both at a distance and in the neighbourhood of their homes. Tradition assigns to members of the clan positions of trust in the service of Humayūn, and dates from his reign the familiar and often contemptuous nicknames by which various families are distinguished; but here, too, tradition is not only unsupported by history, but is hardly reconcilable with history, for many of the families thus distinguished did not branch off from the parent stems until long after Humayūn's time.

4. The long list of distinguished officers of the empire begins with Sayyid Maḥmūd Muḥammad, a Kundliwāl, who was a man of some distinction when he joined the army of Akbar. His services and those of his family began the greatness of the Sayyids of the Bárha, and the marble and sandstone tombs at Majherah still keep in remembrance the names of the blunt old soldier, and of his sons and other relatives, who did so much for the reputation and the prosperity of the clan. The Kundliwāls obtained extensive grants of land in the neighbourhood of Majherah as well as elsewhere, and branches of the family were established at Mawāna in Meerut, and across the Ganges at Chāndpur and Jahānābād in Bijnor. But the period of their power and influence seems to have been short, and under Shāhjahān the Tahanpuri branch of the Sayyids attained to greater power than had ever been reached by the rough and ready soldiers of the Kundliwāl branch.

The rise of the Kundliwāl branch.

5. One branch of the Tahanpuri Sayyids was at an early period of their residence in the district called in to assist the Brahmans of the ancient town of Jānsath against the Jāts who had settled there, and eventually the Sayyids not only expelled the Jāts but took possession of the town. Other branches, too, spread to the south and west, and many members of this clan entered the imperial service, and not a few rose to eminence. But the most notable of all was Sayyid Abulmazafar, commonly called by his title Khanjahān, the minister of Shāhjahān, who received a grant of 84 villages

The Tahanpuri branch.

* Proceedings, Asiatic Society of Bengal, November, 1872.

in Khátauli and Muzaffarnagar and an amount of revenue-free land, which has ever since materially restricted the state revenue in these parganas. Other members of the family, too, acquired through good service and court favour the rest of Muzaffarnagar and passed beyond the Káli into Bagra.

And finally the Sayyids of Jánsath became for some years the rulers of Hindustán, and under the nominal authority of Farukhsír and his short-lived successors, Sayyids Husen Ali and Hasan Ali of Jánsath, were the chief power in the State. Their acquisitions in this district were not, however, extensive, and the downfall of the family was so terribly complete that the hold of the Sayyids of Jánsath on the villages to the north of this district which they had acquired must have been early weakened, and was not eventually maintained.

The Chátraori Sayyids.

But still another branch of the Bárha Sayyids remained, which was destined to enjoy a period of less brilliant, but still respectable, distinction. The Chátraori Sayyids had from Sambalherah and Kaithorah spread over the greater part of Bhúmah Sambalherah and Bhúkarheri, and had even received grants of land in Jánsath and Khátauli. In the final struggle with the Jánsath Sayyids the chief Chátraoris sided with Muhammad Sháh, and Sayyids NaCrat Yár Khán and Shahámat Khán and many others received rewards for their services. The descendants of Shahámat Khán are the only Sayyids of the Bárha who now retain the title of Nawáb. The Chátraoris, too, remained to the last in the service of the empire, and the Sayyids of Mornah in Bhúkarheri received grants of land to the west of the Káli in Chartháwal.

The Jaineri branch.

6. The Sayyids of the Jaineri branch never attained to eminence, and as they now hold land in Bidauli, and have lost their small possessions in the east of the district, they do not come within the province of this report.

Position of the Sayyids at the decline of the empire.

7. The beginning of the decline of the empire then saw the descendants of the settlers in the sand waste the masters of the whole of the eastern portion of the district, and its only and acknowledged aristocracy. Either by grant, purchase, or as it would seem in some cases by the voluntary act of village communities, who felt safer under the protection of a powerful chief, they were the acknowledged landlords of the whole tract, with the exception of the Shekh townships which Imperial piety had scattered over the district, and of the cluster of villages round Jauli occupied by Gurdezi Sayyids. But although the Sayyids were unquestionably masters, the village communities were still strong and powerful, and, as events showed, were ready to assert themselves alike in times of peace and of disorder. The Sayyids held the majority of their estates as non-residents, but branches of the various families had scattered themselves over the country, and especially in the neighbourhood of the original settlements had established themselves in villages of their own. In many cases, no doubt, Sayyids settled in townships in which there were no resident cultivators, or in which the residents were few and weak, but in several instances they established themselves in the midst of strong communities. In the days of Sayyid supremacy, too, many estates were divided off and many petty hamlets were settled, which still, although long ago deserted, preserve the names, if not the memory, of their founders. But a time soon came when no small community could live, and the outlying Sayyid settlements returned to the centres from which they had gone forth, and the settlers in the petty hamlets sought what protection the larger villages afforded.

The decay of the Sayyids.

8. For the Sayyids of the Bárha were destined to share to the fullest extent in the ruin of the empire, with the prosperity of which they had been so intimately connected; and more especially the Chátraoris, who had last of all served under the empire, suffered terribly, partly because they were more inclined to take a side in the troubles that ensued, and partly because their territory, lying along the Ganges, became on more than one occasion a battle-field.

Pathán fort at Sukartar.

9. In the middle of this tract the Afghán chief Najíbuddaulah built his fort at Sukartár to command the ferry of the Ganges, close to the spot where the name of

the village of Firúzpur is said to commemorate a similar occupation in former times. The construction of this fort marks the first loss of territory by the Sayyids, for the three villages Sukartár, Sukartári, and Firúzpur, all commanded by the guns of the fort, were lost to the Sayyids; and far worse than the presence of the Pathán force was the repeated advance of Mahratta armies to attack it. The first investment of Sukartár in 1759 is still remembered, and although the lines of Dátají Sindiah's entrenchments are now hardly to be traced, tradition preserves the memory of the hardships which the Mahratta occupation brought upon the inhabitants. Mornah, the seat of a powerful Sayyid family, and then the chief town of the pargana of Bhúkarheri, never recovered from the ruin which was the result of its fatal proximity to the Pathán fortress, and its consequent convenience as headquarters for the Mahratta army. Thirteen years later, too, Sukartár was again invested, and Mornah was finally reduced after its capture by the Goshains to the condition of a petty village, which it still remains.

10. But besides these accidental evils, the rise of the Patháns was fraught with disaster to the Sayyids of the Bárha. The Afghan chief Najíbuddaulah, and still more his son and successor Zábítah Khán, found it advantageous to hold in check the Muhammadan aristocracy of the district with the aid of Hindu chiefs and Hindu communities; and both to the south and north Gújar chiefs began to encroach upon the Sayyid domain, and even the representatives of Ját and Rájput communities asserted themselves against their former masters; and in the days of Najíbuddaulah's successors the Sayyids more and more decayed. Púr Chapár and a great portion of Bhúkarheri passed into the hands of the Gújar chief of Landhaurah, and from the south the Gújar chief of Baisumha extended his authority until the fiefs of the kinsmen almost met in Bhúkarheri. The town of Bhúkarheri itself seems never to have passed entirely into the possession of the Sayyids, and the Játs of Belrah and surrounding villages threw off the supremacy of the fallen Sayyids and became vassals of the Pathán chief, while to the extreme south-west a Rájput leader received a cluster of villages in mucarari from Zábítah Khán; and there, too, land was lost to the Sayyids.

Policy of the Pathán Chiefs.

11. Nor did the final ruin of the Patháns do any good to the Sayyids. With few exceptions they had lost all prominence in public affairs, and as far as they were concerned, the chief result of the fall of one enemy was the rise of those who had actively aided in his destruction. A fresh leader had to be recompensed for his service, and the Marhal chief, whose descendants became afterwards Nawábs of Karnál, received in mucarari three parganas, and among them Muzaffarnagar, the headquarters of one branch of the descendants of Khanjahán. In other portions of the tract the ruin and death of Ghulám Qádir, the son of Zábítah Khán and the grandson of Najíbuddaulah, seems to have merely substituted new masters for the old. The Gújar chiefs retained their grants, and the Sayyids of Khatauli and Jánsath became the vassals of the European adventurers, who in this tract, on the fall of the Patháns, wielded the power of the Mahrattas. The lesser Sayyids again held from the Gújar and Marhal chiefs their ancestral lands, and after the fall of the Patháns it appears to have been the policy of successive rulers to enlist the assistance of the ancient aristocracy; and although the outskirts of the Sayyid territory were given as rewards to useful auxiliaries, as a rule the old and assured possessions of the Sayyids continued to be held by them, partly on condition of service, and partly for money payments, and the great mucararidárs levied tribute from, but did not dispossess, the ancient owners.

The rise of the Gú and Marhal chiefs and position towards them the Sayyids.

12. But of all the many years of anarchy the last twenty were probably the worst, and the great famine of the "chalísah" (1783 A.D.) must have fallen with terrible severity upon an ill-watered tract, which had been frequently traversed by armies and had continued for many years in a state of anarchy. From the combined evils many Sayyids escaped by leaving the district for Rohilkhand and Oudh, and it was not until many years later that they or their descendants returned, in many cases so long after the establishment of British rule, that the returning refugees never succeeded in recovering their ancestral lands.

The close of the period of anarchy.

Incursions of Sikh and
Rohillas.

13. During the last years of the eighteenth and the first few of the nineteenth century, life and property in the Upper Doab were exposed to a new and increasing danger from the inroads of marauders. Zābitah Khān had allied himself with the Sikhs, and from that time Sikh inroads had become the terror of the country side, and the large masonry enclosures which are met with throughout the district were then constructed for the protection of the villagers and their property until the marauding parties should have passed by. And annexation to the British territory at first brought no relief. There were no longer the forces of the Mahratta generals necessary to collect the revenue, and ready to repel the inroads of other oppressors. Under the collector of Morādābād, and latterly under the collector of Meerut, the Upper Doab was for the first two years of British rule a prey to Sikh and Rohilla marauders, who foreseeing, one might almost imagine, the change that was to come, availed themselves to the utmost of the last opportunity that was to be given them of plundering the Doab. The collector, unable to realize the revenue from the more turbulent portions of the district without the aid of the troops, had in their absence no force with which to defend his district from Sikh and Rohilla ravages. A body of from 4,000 to 6,000 horsemen, joined at intervals by Rohillas from the east of the Ganges, constituted a force which even the most powerful tributaries were unable to withstand, and the holdings of the great mucararidārs shared the fate of the lands held direct from Government. The fortified towns alone resisted the invaders, who on more than one occasion aspired to more profitable marauding than the ruin of petty villages afforded, but they in no way protected the country round.

Ravages of the marau-
ders.

14. The collector, Mr. Guthrie, who seems to have lived in a state of chronic strife with all military officers who came near him, and whose individual troubles probably excited but little sympathy among those who alone could relieve him, was every now and then compelled to take shelter "in a little mud ghurry (Fazalgarh), without any other guard than a few najibs," and could do little more than look on at the outrages which occurred. Nor were the marauders satisfied with plunder: they burned the villages, murdered the zemindars, fired and otherwise destroyed the standing crops, and revenged themselves for the successful resistance of the towns upon the surrounding country. Long after the army of Holkar was chased from Shāmli by the force under Lord Lake the inroads continued, and although in the flying army this district saw the last of its enemies, the Mahrattas, in November, 1804, it was not until after six months more of marching and counter-marching that the detachment under Colonel Burn cleared the district of marauders.

Subsequent period of
peace.

15. From that time forth the history of the tract is a peaceful one. The mutiny brought insecurity and disorder, but on this side of the district comparative tranquillity prevailed, especially on the upland. There were few acts of overt rebellion, few confiscations, and but few severe punishments. From the beginning of 1805 to the present time the Sayyids have gone steadily to ruin, but henceforth they had nothing to fear from violence. The new dangers to which they were exposed were more insidious and still more fatal than the old; and when the Sayyids fell victims to their own extravagance and our revenue procedure, to the civil courts and the ever-watchful money-lender, they had almost reason to regret the days when they were vassals of Gújar chiefs or of Mahratta soldiers, and when the lands that were left to them were every now and then being desolated by the march of armies or by Sikh and Rohilla raids.

The effect of restoration
of order.

16. In the meantime, however, the pacification of the tract and the early years of order and settled rule brought great relief. Throughout the years of anarchy the inhabitants were collected in large villages and in towns, and although cultivation no doubt went on, it was carried on under great disadvantages by people living at a distance from the greater portion of the land they cultivated, and never certain whether they were likely to reap the harvest for which they had toiled. But now the old sites were gradually re-peopled, and although there are even to the present day fewer hamlets than in many other parts of the country, villages sprang up where they were most required. The Sayyids, too, came back from exile, and although the Gújar

chiefs still retained for some years the greater portion of their mucararis, the proprietary rights of the Sayyids were almost universally acknowledged in the tract in which before the fall of the empire they had completely established themselves. But all over the district the old communities showed signs of strength and cohesion, and even at that time, when there was much less tendency than later to favour proprietary communities, the claims of the cultivating bodies were deemed sufficiently strong to demand serious consideration; but in the vast majority of cases the Sayyids were restored to proprietary rights: and in the exceptional cases the grounds of exception can be clearly traced. The Rájput mucararidár retained his hold over a few villages in the south-west corner of the tract, the township of Bhúkarheri continued to be held by a powerful Ját brotherhood, and here and there the influence or authority of a Gújar chief or of an officer in the Mahratta service had so obliterated Sayyid rights that they could not be restored. The lands, moreover, commanded by the guns of the fort of Sukartár were held to belong to no one, and constituted most likely the patch of 4,000 or 5,000 bighas of unclaimed waste, the only land of this description which in 1805 the Collector could point out in this neighbourhood.

17. In the greater part of the tract with which this report deals Sayyids were once more proprietors. Rája Rámdiyál of Landhaurah still retained the villages to the north which now constitute the pargana of Púr Chapár, and to the south Rája Nain Singh of Baisúmha was confirmed in his old fief, which comprised in this district most of the villages now included in pargana Bhúmah Sambalherah. While to the north, however, the old arrangement was allowed to stand during the life of the Rája, to the south the Sayyids very soon got back nearly all the villages to which they had any very strong claim, and from the second regular settlement in 1808 the Rája's mucarari was restricted to estates to which the Sayyids had probably no very clear right.

The position of the Sayyids at the beginning of our rule.

The Marhal chief, who at the conquest held the pargana of Muzaffarnagar, among others, in mucarari, received in exchange lands beyond the Jumna, and his descendants, the Karnál family, although now the chief landlords in the tract which is the subject of this report, owe their position partly to Imperial grants, but mainly to purchase from the Sayyids.

18. But although the Sayyids were thus restored to proprietary rights in the greater portion of parganas Muzaffarnagar, Bhúkarheri, Khátauli, Jánsath, and Bhúmah Sambalherah, they no longer held by virtue of inheritance, but in very many cases merely retained the lands which they had held either from the Mahratta Government or from Gújar and other chiefs. The mucararis had been granted to individuals, not to communities, and hence began the troubles of the Sayyid casbas which even now furnish so much work to a settlement officer; for as the last mucararidár died so recently as 1845, after Mr. Thornton's settlement, conflicting claims of one or two owners and a large and turbulent body of landless Sayyids have only recently been decided. In fact, until quite recent years, the process of weeding out rightful owners has been going steadily on, and many of the largest Sayyid estates have not been acquired by inheritance or even by purchase, but are examples of the survival of the fittest, or of the least scrupulous, members of large communities. In many cases the ousted owners have been avenged, and the spoiler and the spoiled are alike at the mercy of the money-lender; while in others the old quarrel still goes on, and even the most well-meaning and considerate landlords have inherited with their property an amount of inveterate hatred which, always unpleasant, is frequently inconvenient, and on some occasions dangerous.

19. It is difficult to state with accuracy what rights the old cultivating communities enjoyed under their Sayyid masters, but in old papers, both before and under our rule, the names of the mucaddams or representatives of the village communities were recorded as well as those of the proprietors. The tenants in the villages occupied by

The cultivating communities.

communities of long standing unquestionably sank wells, earthen and masonry, and planted groves up to the date of the High Court's memorable decision.

The village communities in Púr Chapár invested with proprietary rights.

20. But while in the greater portion of the Ganges and Káli Doáb the village communities received eventually less than they might have fairly claimed, those in Púr Chapár experienced a happier fate. Rája Rámdiyál retained the greater portion of the pargana until his death in 1813, and the villages held in mucarari by his relatives, and revenue-free by his widow, gradually fell in. Most of the villages in this pargana had been acquired by the Sayyids, and to but few could the heirs of the Gújar Rája make any valid claim. And the Sayyids had in most instances been long out of possession, and village communities were at the time in the ascendant; and as against the Sayyids the communities won the day, and Sayyids obtained possession of only one or two estates of poor quality, either uninhabited or occupied by weak communities.

21. But far more fortunate were the Banias who had purchased in some cases the rights of Sayyids, or could show deeds of sale executed by the mucaddams. Thus early they had learned to place their reliance on the civil courts, whose procedure seems to have justified Mr. Holt Mackenzie's fear that they had "too little distinguished the different interests which attached to land and its produce." From the civil courts the Banias got all they wanted; in the revenue courts it seems to have been assumed that rights on the part of the communities were incompatible with the Sayyid claims. In one village the Sayyids, whose old fort and masonry houses and well-built tombs evinced the permanent nature of their occupation, were decided to have no rights. In another, where the community was older and stronger, but the rights of the Sayyids had been sold to the Diwán of the late Rája, the Bania was maintained as landlord, and his efforts were equally successful where he had purchased what rights he possessed from the representatives of the village communities.

Mr. Cavendish, who completed the fourth regular settlement (1825-26 to 1829-30) in the northern parganas, appears to have throughout taken the part of the communities, to have held that the representative of a community could alienate his own rights, but not those of the community; but the Mahájans seem to have held their own, and while in some cases, in the search for cultivating landlords, even the Chamars holding land in the midst of a weak Ját community were invested with proprietary rights, and in another Ját community who could point to a descent of only two and three generations from the men who had settled round the Sayyid fort were declared proprietors; in others the faintest Sayyid claim became unimpeachable when it passed into the hands of a Bania, and the strongest cultivating right melted away when he resisted it.

Advantages of a biswadári settlement.

22. The old communities upon whom were conferred proprietary rights have certainly shown themselves right worthy of the consideration with which they were treated; they have held together under no ordinary difficulties, and in a dry unwatered tract have paid to Government assessments which would have been severe even under more favourable circumstances. But strong communities cannot always be improvised; and the new untried communities proved unequal to the responsibilities which were imposed upon them, and have in a great measure given way. It would probably have been more in accordance with justice, and would have secured more general prosperity, if the rights of both parties, the former Sayyid owners and the village communities, had been recognized. The Sayyids would then have become taluqdárs, while the old village communities would have remained in possession of all that they had previously enjoyed, and the hardship that has been inflicted on those communities which had the misfortune to come in contact with the Diwán of the Gújar Rája would have been avoided. And there can be little question that in the case described by Mr. Cavendish (page 100, Revenue Selections, 1872) what the community really claimed was a biswadári tenure, and what they relinquished was the claim to the taluqdári rights which had been enjoyed by the Sayyids. It was not until many

years later that in this part of the country the people, warned by bitter experience, used the word mucaddam as applicable to the representatives of a non-proprietary community alone. Another great advantage of a biswadári settlement in Púr Chapár would have been that the introduction of the system into the district might have led to its extension before it was too late to the old firmly-established communities in the south, over which the rights of the Sayyids were held to have been less decided than in the villages inhabited by more recent and less united settlers. As it happened, only two communities acquired biswadári rights; in one case as a compromise in a suit regarding the purchase by a Ját community of proprietary rights, while in the other it was the gradual result of the contact of an energetic, pushing Ját brotherhood with an involved Sayyid landlord.

23. But to return to the period of the final settlement of landed tenures in this portion of the district. To the north, Taga, Gújar, Ját, and Ráipút communities were invested with proprietary rights, while in exceptional cases Sayyids were declared proprietors, and the Mahájan who had purchased in some cases the rights of Sayyids, in others those of representatives of cultivating communities, received in either case the fullest consideration. To the north, as to the south, the Gújar Rájas were allowed to retain only those estates to which no claim of any strength was made.

Proprietary classes at the beginning of British rule.

24. In nearly the whole of the central tract, and indeed down to the southern boundary, Sayyids were confirmed in full proprietary rights over the lands which their ancestors had acquired. But in the south-west corner along the West Káli the Rájpúts maintained the position which they had gained in the latter half of the eighteenth century, and to the south-east several Ját communities were declared proprietors in estates which had remained longest with the Gújar Rájas. Throughout the tract were scattered Shekh townships, and in Bhúkarheri three village communities held their own, and amid the general resumption of the Gújar mucararis two minor chiefs retained their estates. One estate, too, had already been sold to the Diwán of the Rája of Landhaurah, and three unclaimed properties were settled with a member of the same family, and in two more estates the hold of the Sayyids was so weak that the Ját kanúngo family of Bhúkarheri acquired in some informal manner the proprietary title.

But with all these exceptions, at the beginning of our rule Sayyids were in possession of 257 out of 361 villages, containing an area of 239,287 acres. After nearly 70 years of British rule, during which there has been almost unbroken peace, during which the agricultural condition of the district has marvellously improved, the area of their property has dwindled to 124,660 acres. And still the ruin of the race continues, extravagance and litigation have in recent times been far more fatal than severity of assessment or extreme punctuality of collection; and while the latter grounds for Sayyid decay cannot be urged with the same force as of old, reckless carelessness in money matters is as much the rule as ever it was, and family dissensions are far more general.

Fiscal History.

Of the six parganas which compose the Ganges Canal tract in this district, Púr Chapár, Muzaffarnagar, Bhúkarheri, Khátauli, Jauli Jánsath, and Bhúmá Sahambalherah, all but Muzaffarnagar are recognizable in the lists of the time of Akbar. The present pargana Jauli Jánsath, or rather many of the villages composing it, were included in the Jauli pargana, until, in the time of Farukhsár, the influence of the Jánsath Sayyids obtained the formation of a separate pargana of Jánsath. Eventually the two small parganas were united, and since the new tahsíl has been built at Jansath the old name of Jauli Jánsath is falling out of use, and the pargana is frequently, but not invariably, called after what is now unquestionably its chief town. The town of Muzaffarnagar has given its name to the old pargana of Sarwat, since the town was founded by Sayyid Abul Muzaffar, otherwise called Khánjahán, in the

Parganas composing the tract.

reign of Sháhjahán. Of all the parganas Khátauli has changed least, and next to it Bhúkarheri, sometimes called in former times after the Shekh town of Sikri. With Púr Chapár has been incorporated the upland villages of pargana Tughlakpur, afterwards named Núruagar from the summer residence of Núrhahán. Bhúmah, after having been lost in the parganah named from its Gújar capital Baisumha, once more figures in the list of parganas along with Sambalherah.

Changes in pargana boundaries and advisability of assessing in future by tahsils.

2. The changes which have taken place in pargana boundaries since the beginning of our rule have been incessant, and although these subdivisions are now more compact than formerly, it is I think almost desirable that the tahsíl boundaries alone should be entered on the map, and that the parganas which have been so frequently re-arranged that they cannot be called old, should be forgotten in the north-ern as well as in the eastern districts of the North-Western Provinces. As they at present stand they in no way facilitate revenue work, and such haphazard subdivisions have been a hindrance rather than help to the proper arrangement of circles for police purposes.

During the course of settlement operations I have, under the peculiar circumstances of this revision, followed the example of my predecessors, but experience has led me to the conclusion that, in future, pargana limits should be entirely disregarded. But as regards the fiscal history of the tract, the division into parganas is not without some interest and importance, for not only is the bulk of the information which has been obtained regarding former settlements recorded by parganas, but the treatment of the various parganas has, owing to accident or design, varied greatly.

Defective character of materials for fiscal history.

3. Unfortunately the information which has been obtained is somewhat limited in extent, and gathered as it has been from old copies of vernacular proceedings and from kanúngos' records, more than from reports submitted to Government, it shows facts rather than accounts for results; and the interpretation which is given of these facts is probably rather than certainly correct.

Revenue arrangements during two first years of British rule.

4. During the first two years of our rule, 1803-04 and 1804-05, the British Government was naturally compelled to follow in the footsteps of its predecessors, and the extent of land held by the great mucararidars rendered this course comparatively easy as well as inevitable. Rája Rámdiyál of Landhaurah held the greater portion of the present pargana of Púr Chapár and some estates beyond its limits. Rája Nain Singh, the Gújar chief of Baisumha, remained master of Bhúmah, and the Marhal family, which later received Karnál in exchange for its jaedád in this district, retained possession of the greater part of Muzaffarnagar, as also of Shoron and Chartháwal to the west of the Káli river. The descendants of Khánjahan, the minister of Sháhjahán, held in detached but not very numerous talukas nearly the whole of Khátauli, and a Rájput mucararidar held the greater part of the remainder. The Sayyid families of Jánsath, Jauli, and Chitaura dominated in Jauli Jánsath; and in Bhúkarheri and Sambalherah lesser mucararidars and a few communities seem to have shared the land with the Gújar chiefs and their retainers. In this part of the district, therefore, our Government had to deal with but few individuals.

The first regular settlement, 1805-06 to 1807-08.

5. The first triennial settlement from 1213 fasli to 1215 fasli (1805-06 to 1807-08) was made by Mr. Guthrie, who seems to have been a man of great assiduity, but of narrow views, who came into his new district with a number of preconceived opinions, to which he held with unwavering, if somewhat obstinate, perseverance. A man on the worst terms with his own countrymen was naturally forced to lean on the great tributaries for that support which the military commanders afforded only when they were absolutely forced to do so, and it is not matter for surprise that Mr. Guthrie should have held with more than ordinary enthusiasm the view not unusual at the time, that the one thing wanted for the happiness of the country was a landed aristocracy, even if composed of savage freebooters or of rude mercenaries. But here at least such views did little harm: the confirmation for life of the great mucarari of

Rāja Rámdiyál was a measure of administrative expediency, if not of necessity, and it postponed the discussion of rights to the land until a time when cultivating brotherhoods and small proprietors had a better chance of a favourable hearing.

6. Imperial considerations again urged the transfer of the Marhal family, which held Muzaffarnagar, Shoron, and Chartháwal, to the newly-acquired lands beyond the Jumna; and when the Marhals left the tract, there could be no doubt as to the persons who were to be regarded as proprietors. For throughout the greater portion of this tract the claims of the Sayyids were universally recognized, and in them this part of the district had a landed aristocracy whose position the most ardent upholders of village communities could hardly have overlooked. Settled in the district for some four hundred years, the Sayyids of the Bárha had from a small beginning attained to great power and influence. They were no mere upstarts of yesterday who happened by a lucky chance to have held at the conquest positions of importance, which likely to have been lost in another decade of anarchy, were rendered permanent by the advent of a settled government. They formed not only an acknowledged but honoured aristocracy, and Hindu and Muhammadan concurred in their respect for a clan which, proud of its origin, had won for itself special claim to esteem by the long list of shrewd statesmen and gallant soldiers which it had produced. And even in the recent half century of disaster the Sayyids of the Bárha had maintained their ancient reputation for military efficiency; they no longer furnished great leaders, but they were well known as brave and hardy horsemen, and with all their faults they constituted a proprietary body of more than average merit. They were entirely free from religious bigotry, and even in their religious ceremonies they maintained friendly relations with their Hindu neighbours. They lived on and managed their properties, and although at times arrogant and harsh, they are still better landlords than most others, and having stood for some years in the place of more than one Sayyid proprietor, I can testify to the influence over the people which a Sayyid landlord can exert, and to the kindly feeling which still exists towards the old houses. Even the capitalist speaks with reverence of the old families which he has supplanted, and it says a great deal for the goodness of one side of the native character that the poorest Sayyid cultivator is still spoken of as a Sayyid sahib, and is treated with a degree of respect which is often denied to the richest of his neighbours.

Recognition of proprietary rights of Sayy families.

7. Such were the people with whom the earlier settlements were made. The most influential among them, the representatives of great statesmen and successful generals, held large taluqas, but there were many villages in the possession of small proprietors or of brotherhoods, the members of which were glad to eke out an insufficient income by military service. For one reason or other they do not seem to have taken kindly to the military service of the British Government, and this source of income began to fail the clan, when the regularity of our revenue system made such help more necessary than ever to the proprietary brotherhoods.

8. It is difficult now-a-days after seventy years of settled government and almost unbroken security to judge of assessments imposed at the beginning of our rule; but the first settlement does not, either owing to its moderation, to fairly high prices, or to good seasons, seem to have pressed heavily. The basis of assessment was the estimate of officials, checked by reference to former accounts, occasional inspection by the collector, and in case of objection the measurement of the crops.

Moderation of first regular settlement.

9. The second settlement, that of Mr. H. Dumbleton, was concluded for another term of three years from 1216 fasli to 1218 fasli (1808-09 to 1810-11), and owing either to its inherent defects, or to accidents of season, or to the rigidity of our revenue system, or to all these causes combined, it led to many transfers and much distress.

The second regular settlement, (1808-09 1810-11) extended 1811- to 1814-15.

10. It would appear from the fiscal history of a quite sufficient number of estates that a populous well-to do village could, seventy years ago, pay into the treasury a revenue as high as should be demanded from it on the half-asset principle now,

Severity of the second settlement and its consequences.

however great the changes which have taken place since the beginning of our rule. And these estates, which at the early settlements were treated with the greatest severity, have fairly held their own, when inhabited by strong brotherhoods which were it is absolutely certain sufficiently numerous even seventy years ago for the effective cultivation of their lands. But wherever the brotherhood was disunited, or the population insufficient, assessments which, judged by the present standard, at first sight appear to have been moderate, quickly led to transfers.

11. It seems certain too, that although the great mucararidárs could not shield their villages from the most terrible incursions of marauders, they prevented or moderated the effects of lesser raids, and the position of the more northerly parganas of the tract may have helped to lessen their insecurity. The raids seem to have had a general tendency towards the Meerut border, and Sikhs and Rohillas would appear to have been much oftener round Khátauli and Míranpúr than to the north of Muzaffarnagar; and there can be little doubt that Khátauli, under its broken Sayyid landlords, was harried and desolated to an extent unknown in the northern parganas, and that comparatively few of the villages now existing survived the years of anarchy which preceded the conquest.

12. And the second triennial settlement was one of steadily advancing demand, and it had the misfortune to be preceded by "the calamitous season of 1215 fasli" (1807-08). A bad harvest, increasing demands, and the rigidity of our revenue system soon made themselves felt, and in most parganas transfers began with the new settlement and continued to its close; and, although to a less extent than in many other districts, "the scourge of public sales broke in upon the proprietors," and "the ruinous system of farming the revenue of extensive tracts to speculators and strangers" was tried with the usual unhappy results.

Extension of period of settlement.

13. This second triennial settlement was intended to have been a permanent one, but, fortunately both for the exchequer and the country, the authorities at home refused to sanction the arrangement. No steps had been taken towards a revision of the settlement, and the Board of Commissioners, availing themselves of the silence of Regulation X. of 1812 in regard to it, left the settlement undisturbed, and the duty of the collector, Mr. Oldham, was confined to the settlement of lapsed farms and of those few estates the proprietors of which declined to abide by the existing arrangements. With these exceptions the second settlement was allowed to remain in force for a further period of four years from 1219 to 1222 fasli (1811-12 to 1814-15). And the assessments of Mr. Dumbleton were destined to be tried at the close as at the beginning of the period for which they were in force by bad seasons. The spring crops in 1815 were very seriously injured, and in some cases destroyed by the early rain before they were stacked, and this calamity was followed by a drought.

The third regular settlement (1815-16 to 1819-20) continued to 1824-25.

14. Mr. Colin Shakspear, to whom fell the task of revising the assessment and of fixing the demand for the quinquennial period from 1223 to 1227 fasli, was so impressed by the distress which prevailed that he granted reductions in all the southern parganas, Khátauli, Jauli, Bhúmá, and Sambalherah, as well as in most of the adjoining parganas of Meerut, which afterwards contributed villages to the district of Muzaffarnagar. Khátauli especially he held to be so much overassessed, that he reduced the demand for 78 estates from Rs. 52,289 to Rs. 45,708 in the first, and Rs. 47,669 in the last year of settlement.

The condemnation of Mr. Shakspear's work in the southern parganas.

15. Then, as now, the success of a settlement was judged of by the balances, and although the settlement of Mr. Dumbleton had led to continued transfers, and although 21 villages in Khátauli had been put up to sale, and 13 were sold for arrears in the year 1222 fasli alone, and although even before that year village after village had broken down, Mr. Shakspear's proceedings were sternly disapproved of, a revision was ordered, and was only prevented by the death of the revising officer,

Mr. Calvert. Punctuality of collection was looked upon as a certain proof that the old demand was a moderate one, and Government orders and Mr. Holt Mackenzie's memorandum, written two years later, concur in depreciating Mr. Shakspear's work. As far as it is possible now to judge, Mr. Shakspear's reductions were absolutely required, and they were granted most liberally in the estates, which at that time were almost or wholly uninhabited. Unfortunately Mr. Shakspear did not enter into much detail in furnishing reasons for his reductions, and his report was accompanied by estimates of assets which in no way guided his assessments, and which were in many cases either wholly untrustworthy or showed the assessments to be wrong. In one respect Mr. Shakspear was very far ahead of his own generation. He not only expressed, but acted upon the belief that it was undesirable to oust the old proprietors solely because they could not pay assessments of intolerable severity, and was in this respect in advance of many of his successors, and even of Mr. Edward Thornton, who followed Mr. Shakspear twenty years later, and who, notwithstanding the moderation of his assessments, wrote of general and compulsory transfers of proprietary right by means of the fixation of a high revenue demand as a mere question of expediency, irrespective of any sentiment of justice.

16. In the northern parganas Mr. Dumbleton's settlement appears to have pressed less heavily, and in Muzaffarnagar reductions were not apparently required, and were certainly not given. But in Bhúkarheri the second settlement was unquestionably severe, and modifications were made at the close of the triennial period, and still further reductions were granted at the third regular settlement. Indeed, it was not until Mr. Thornton's settlement in 1840-41 that the demand of the second settlement was exceeded. More than three-fifths of the present pargana of Púr Chapár was included in the mucarari of Rája Rámdiyál of Landhaurah, and came under settlement for the first time in 1221 fasli (1813-14). The Shekh township of Púr and the outlying villages belonging to it, as well as other estates in which Sayyids had formerly more distinct rights, were here, as in Bhúmah, after the first settlement, withdrawn from the mucarari, and were assessed in the second regular settlement at a sum which was never exceeded until the present revision, and then only by 20 per cent. These villages indeed shared the fortunes of the precisely similar estates in Bhúkarheri. Their assessments were reduced and equalized at the third settlement, and there was no general or serious enhancement until the present revision more than sixty years later, when the canal had changed the circumstances of what had been a wholly unirrigated tract.

The northern parganas.

17. Throughout the tract, then, with which this report deals, the third regular settlement brought reduction or equalization except to the bulk of Púr Chapár, which came under different arrangements. Out of 54 villages now composing the upland pargana 31 were held in simple mucarari by Rája Rámdiyál, and were settled with the proprietors on his death in 1813. Three were held revenue-free, and did not lapse to Government until seventeen years later, on the death of Ráni Ládkanwar, the daughter-in-law of the Rája. The settlement of the lapsed villages was entrusted to Mr. Chamberlain, whose name has since been held to be synonymous with overassessment. But as far as this pargana is concerned, it is to be observed that the assessments remained practically unchanged throughout subsequent revisions, and that even a specially painstaking officer like Mr. Cavendish, who followed after an interval of ten years, satisfied himself after a very minute investigation with comparatively trifling modifications tending towards the equilization, not the reduction as far as the pargana as a whole is concerned, of the Government demand. And however severe Mr. Chamberlain's assessment may have been, his settlement had this great merit, that he admitted the village communities to engagements, and heavily as the burden may have pressed upon many communities they were probably as well off as they were when under their Gújar master, and far better off than when during the next settlement they were handed over to the oppressive exactions of a ruthless farmer. And the great defect of all the early assessments was one of principle; not only was the margin of

Pargana Púr Chapár.

profit left to the zemindar so small that a slight error in the estimate of assets left him with an overburdened property, but even if the estimate was a perfectly accurate one, the share taken by the State was so large and the system under which it was collected was so rigid and inelastic, that no proprietor of moderate means could in a dry ill-watered tract pay, without embarrassing himself, through a series of years the unvarying demand of Government. Far more in all probability than the weight of our earlier assessments is the excessive want of elasticity in our revenue system responsible for the ruin of so many villages. Every season of drought brought difficulties and transfers in its train, and needy and extravagant proprietors and weak communities rapidly lost their land.

British and Native systems of revenue management contrasted.

18. A statement of collections in a considerable portion of the Bhúkarheri upland for the five years immediately preceding our occupation has been preserved, and helps to show the difference between the system to which the people had been accustomed and that under which they were destined so seriously to suffer.

1206 F. 1798-99 A.D.	1207 F. 1799-1800	1208 F. 1800-01	1209 F. 1801-02	1210 F. 1802-03	1211 F. 1803-04	1212 F. 1804-05	1213-15 F. 1805-06 to 1807-08	1216-18-22 F. 1808-09 to 1810-11 continued to 1814-15.	1223-27-32 F. 1815-16 to 1819-20 continued to 1824-25.	1233-37 F. 1825-26 to 1829-30
					First summary settle- ment.	Second summary settle- ment.	First regular settlement.	Second regular settlement.	Third regular settlement.	Fourth regular settlement.
Ra. 16,504	Ra. 18,667	Ra. 14,267	Ra. 20,336	Ra. 22,173	..	..	..	Ra. 31,106	..	Ra. 29,305

It may be that the resumption of revenue-free and service lands warranted the enhancement in the first settlement of which records have survived, although the fact that for twenty years no further increase was possible is against this supposition. But even if the assessment did not exceed the eleventh of the average assets, it must have been a hard trial for people impoverished by war and repeated droughts, and accustomed to the elastic system of our predecessors, to bear up against the inflexible regularity of our revenue administration. And this the Sayyids, who owned by far the greater portion of the tract now watered by the Ganges canal, failed to do; and their own reckless extravagance combined with our system, even more than with the weight of our assessments, to ruin the people whose proprietary rights were maintained or restored at the beginning of our rule.

General result of the third regular settlement.

19. The third regular settlement then brought to the southern parganas distinct relief to the central tract relief and equalization. When it was concluded Púr Chapár was endeavouring to pay into the treasury assessments which in many estates are not exceeded even now, when, instead of being wholly dry, the pargana is fully irrigated. Although Mr. Shakspear's arrangements were generally condemned as unsatisfactory because they did not result in an enhancement of the land revenue, and although the southern portion of Saháranpur district was specially excluded from the "general benefit of an extended lease," and although in the southern parganas, at all events, Mr. James Fraser went over the assessments, the changes made do not appear to have been as a rule very important even in the southern parganas, and in Muzaffarnagar, Bhúkarheri, and the more early assessed portion of Púr Chapár the settlement was, it is believed, maintained.

Settlement of the lapsed mucarari in Púr Chapár.

20. In the last-named pargana, however, the villages of the lapsed mucarari were not so fortunate, and Mr. Moore, upon whom devolved the duty of making the second regular settlement of these villages for the period from 1227 fasli to 1232 fasli (1819-20 to 1824-25), is still remembered as one of the worst enemies with whom the Taga and Gújar brotherhoods had to deal. He did not raise the assessments of his predecessors, and in some cases he reduced them; but the rights of the communities were treated either with disfavour or neglect, and "the ruinous system of farms" was

generally introduced. Fortunately, however, it was one man, and not a tribe of influential persons, who profited by the new policy, and Shekh Kalan of the Shekh casba of Rájúpur, formerly in the Mahratta service and latterly holding the rank of captain under the British Government, had too little of the *suaviter in modo* to be permanently successful. At first, however, he obtained everything he wished: village after village fell into his hands; in some cases he is said to have farmed with the consent of the proprietors; in other villages the zemindars refused, or were said to have refused, to engage; the owners of others did not attend, or were at least recorded to have stayed away, for in such cases there is no difficulty in inventing reasons and in substantiating them by documents: and Shekh Kalan seems to have had a good deal of his own way in the revenue as well as in the civil courts of the day. Had he been left undisturbed he would no doubt in time have become permanent owner of the splendid property which he had succeeded in getting into his hands, but his exactions became so notorious, and the resistance of the people so determined, that an investigation into the circumstances was made in 1822, the farms which had never been confirmed were cancelled, and the communities were admitted to engagements.

Members of the family of Shekh Kalan still own three estates in the district and a portion of a fourth, but they have steadily lost ground, and while still evincing the bad qualities as landlords for which their ancestor was distinguished, they show little of his capacity. Serious as were the evils resulting from Shekh Kalan's three years of power, the communities survived that as well as many other disasters, and the lands which the Shekh had managed permanently to acquire were gradually bought back. Now-a-days, indeed, the communities are pushing their way into the Shekh villages, and are acquiring bit by bit the land of their ancient enemy.

21. The fourth regular settlement was concluded by Mr. Cavendish in the northern parganas, and by Messrs. Dundas and Boulderson in those of the south. In the year 1823, shortly before the term of this settlement began, Muzaffarnagar had been formed into a sub-collectorship under Mr. Dundas, and all the parganas with which this report is concerned, with the exception of Bhúmáh Sambalherah, had henceforth Muzaffarnagar for their district headquarters. This settlement, like its predecessor, brought no considerable enhancement. In Muzaffarnagar and Púr Chapár there was a slight rise, mainly attributable, it is believed, to the falling in of revenue-free holdings; in Bhúkarheri the assessment still remained below that of the second settlement; in Bhúmáh Sambalherah a reduction was granted by Mr. Tulloh, who settled this pargana for the period from 1231 to 1242 fasli (1823-24 to 1834-35); in Khátauli and Jánsath the records are too incomplete to warrant an assertion, but it may be assumed with safety that no general enhancement was made upon the old demand.

The fourth regular settlement, 1233-37 fasli (1825-26 to 1829-30)

Owing to the preservation of some of Mr. Cavendish's notes, extracted in Mr. Holt Makenzie's second memorandum, a better idea can be obtained regarding the state of Púr Chapár at this time than is obtainable regarding any other portion of the district at a time anterior to Mr. Thornton's settlement; and, as a comparison of the present state of these villages with their condition forty years ago may be held to have some interest, the statistics for several villages at the fourth settlement have been placed side by side with those of the eighth just completed, in appendix III.

Mr. Cavendish's notes regarding villages in Púr Chapár.

22. During the currency of the fourth settlement Muzaffarnagar was converted into a regular district, and Mr. Franco, who had received charge of the sub-collectorship in 1826, was the first collector. To this officer was entrusted the duty of making the fifth regular settlement, which, intended to last for five years only, was confirmed for a second quinquennial period and remained in force until 1840-41. This settlement again aimed at equalization rather than enhancement, except in one pargana, Púr Chapár, and here the enhancement taken at this settlement was again remitted by Mr. Thornton.

The fifth regular settlement, 1238-47 fasli (1830-31 to 1839-40).

Pargana Bhúmáh Sambalherah, which was still retained in the Meerut district, was settled by Mr. Glyn in 1830-31=1238 fasli at a slight increase on the old assessment, but his settlement was three years later revised by Mr. (afterwards Sir Henry) Elliot, and the assessment was again raised, and the demand eventually fixed was more than 15 per cent. in excess of that assessed by Mr. Tulloh eleven years before. This enhancement, giving assessments which even nearly forty years later, when canal irrigation had worked a considerable change in the circumstances of the pargana, could not in several estates be maintained, completed the ruin of several Sayyid families.

The sixth regular settlement by Mr. Thornton, 1841-42 to 1861-62.

23. The fiscal history of the tract has now been brought down to the period of Mr. Thornton's settlement, regarding which there is much though still insufficient information, for the loss of all detailed records has owing to the mutiny been very complete. At this settlement, completed, as far as the tract under report is concerned, in 1840-41, the district reaped to the full the benefit of having been cut off finally from the richer parganas to the south. For it is an unquestionable advantage for a district during the progress of settlement to consist of a fairly homogeneous tract, and it is not unlikely that the early troubles of Khátauli may have been in some measure due to its vicinity to a parganah like Meerut, and still more to Sirdhanah, distinctly superior in natural fertility, and less exposed to the ravages which devastated the northern parganas. But not only was there now no very greatly superior tract left on this side of the district, but Mr. Thornton entering it from the north, and having previously settled Saháranpur, was tempted to bring into this district rates which he had found suitable for the poorer parganas to the north.

Mr. Thornton's soil classification.

24. The system adopted by Mr. Thornton differed in several important points from that which seems to have been followed by his predecessors and by Mr. Thornton himself in the Saháranpur district. In Muzaffarnagar Mr. Thornton had full control of settlement operations from the beginning, and he had acquired much local as well as general settlement experience in his settlement of the Saháranpur district. Whatever difference of opinion there may, therefore, be as to the wisdom of following Mr. Thornton's system after twenty years of unexampled improvement, there can be none as to the ability and care with which it was worked by Mr. Thornton, and the assessments fixed on its basis had the great merit of being in nearly every case moderate. Mr. Thornton had found in Saháranpur that three natural soils—rausli or loam, dakar or clay, and bhúr or sand—were generally known to the people, although, owing to rents being paid "in kind, little attention was paid to them." "Dákar" (Mr. Thornton continues) "is a stiff soil, but rausli and bhúr are light; and though at the two extremes these are the best and worst, yet in very many cases it is impossible to decide under which of these two denominations a particular field should most correctly be classed. In the measurement now going on in the Muzaffarnagar district all such doubtful cases are classed under the inferior denominations, but I found that while one amín uniformly pursued this system in Saháranpur, another thought it proper to put down all such land as rausli. The denominations have reference merely to natural qualities, but there ought to have been a further distinction of that soil which from continued high culture has attained peculiar excellence."

The entry of mísan or manured land.

25. In Muzaffarnagar accordingly all land ordinarily manured was recorded as mísan, and Mr. Thornton held that the proportion of mísan throughout the district must be about $16\frac{1}{2}$ per cent. to keep up cane and cotton crops covering four and three per cent. respectively of the cultivated area. Generally Mr. Thornton seems to have assumed a minimum of 20 per cent. and a maximum of 50 per cent. The limitation of the mísan area that was to be charged mísan rates afforded, where the rates were followed, very distinct relief to many of the fine villages held by cultivating brotherhoods, which had always borne the burden of heavy assessment; but the fact that such a limitation was necessary, and the instances given by Mr. Thornton,

showed that the difficulty of securing even tolerably accurate entries of this soil were felt then as well as later ; and it is clear that the subordinate settlement officials, holding to ancient traditions, did their best to ensure the continuance of the old severity to the villages held by industrious communities. And no system which was satisfied with a percentage of $16\frac{1}{2}$ or even 20 per cent. of *mísan* in a district with 5 per cent. of the cultivated area under cane and three per cent. under cotton could obtain such results as 75 and 82 per cent. in the villages named by Mr. Thornton.

26. In recording irrigation, Mr. Thornton looked to land ordinarily irrigable, not merely to the irrigation of one year. "It is not that land alone which is actually irrigated in the year of measurement which ought to be put down as such. The rabi crop of the past year is succeeded by kharif in the present, and it is not customary to water the kharif: so of that land round a well which is all of it watered in the course of two years, only half is irrigated in either one year. Both have been treated by me as irrigated land, though in the khasra and early papers a distinction is preserved by using the name of "cháki" for the one and "muhítah cháh" for the other. It will be more fully shown further on that in estimating the average rent-rate the produce of the latter is calculated as if the land were unirrigated, and is then added to the produce of the former, after which the average of the two is taken as the uniform rate of the whole, and in subsequent papers the distinction is dropped. Also the actual amount of land irrigated by a kucha well is not exclusively considered, but the object proposed is to ascertain the extent of land which possesses this valuable peculiarity of a substratum which admits of such wells being readily and cheaply made."

Irrigation entries.

27. Mr. Thornton's exposition of his system is clear and simple, but it has not been always clearly understood by his successors ; and as the accuracy of my remarks upon this subject with reference to the western parganas of the district has been called in question by an authoritative critic, I may be allowed to devote a few lines to the subject.

Mistakes made regarding Mr. Thornton's system by his successors.

Mr. Thornton had two courses open to him : he might have calculated the produce of the irrigated area of one year and treated the irrigable but not irrigated land as dry ; or he might, as he eventually did, take the average produce of the irrigated and irrigable, but not irrigated land, and apply the rate thus obtained to the whole irrigable area. But when Mr. Thornton's successors adopted, even with slight modification, his assumed rates, they had no such option : they were bound to apply the rate fixed for irrigable land to the whole irrigable area, and not to the lesser area watered in the year of measurement.

28. But there was nothing, it is presumed, that was new in Mr. Thornton's treatment of the irrigated area, and the points in which his system differed from his own in Saháranpur and from that of Sir Henry Elliot and Mr. Plowden in Meerut was in the addition of *mísan*, in the greater detail of and attention to various soils, and in his minute and laborious classification of villages. "The basis of this system lies in bringing together mauzas whose soil is similar in quality." Relying on his *mísan* entries to correct any errors due to difference in the standard of cultivation, Mr. Thornton was mainly guided by situation. But in the arrangement of his circles he followed a practice which must seem to most settlement officers of the present day an erroneous one, that (namely) of determining the limits of the various circles during instead of after measurement. "It does not appear" (Mr. Thornton writes) "that the same accuracy could be obtained if the circles were not defined till after the season's work of measurement has been completed, because those local peculiarities will not be afterwards recollected, and they are much more likely to be noticed if inquired for at the only time when the person called on can obtain the information most easily."

Peculiar features of Mr. Thornton's system of classification of villages.

"Also each set of mauzas does not consist of one uniform quality of soil throughout, but has in it several varieties, of which the ordinary denominations are *mísan*, *rausli*, *dákar*, *bhúr*. If one set has just been closed, and the first mauza which is

to come in the new set is under measurement, an amín may observe that the soil of any one of these denominations is better or less good than that of the same name which he has lately been measuring in the previously completed set ; but he still has no hesitation in writing the field down as rausli, or whatever the proper name may happen to be, because he knows that this rausli is not to be classed with that of the other set, but will have its own rate of assessment suited to its own quality. But if he has no certain knowledge that the mauza is not to be classed with those just before measured, he is inclined to enter this rausli field as bhúr or mísan as the case may be, because he thinks it more equal in quality to the one or the other that he has lately been conversant with than to the rausli ; supposing the mauza to be classed properly in the subsequent arrangement of circles, its land of one sort will thus inadvertently be assessed at the rate of that of some other denomination."

Objection to Mr.
Thornton's system.

29. To these views it may be objected that some exact knowledge of a tract is required before estates can be properly classified, and that Mr. Thornton's system left far too much to the amín—indeed allowed him a degree of discretion which is now rightly reserved to the assessing officer. But such considerations, although decisive enough against Mr. Thornton's system now, would have little weight at a time when the detailed inspection of villages was practically unknown, and when settlement officers boasted that in ten days they could acquire an accurate knowledge of a large tahsil. Mr. Thornton appears to have supervised measurement operations with great care, and, under the circumstances, it is natural enough that the division into circles should have taken place while these measurements were going on, for they were not to be followed by the minute and laborious inspection of estates, which is the invariable prelude to assessment now-a-days.

Divisions into circles.

30. Mr. Thornton divided the Ganges canal tract into fifteen circles, and as Bhúmáh and Sambalherah each constituted a separate circle, the total number of circles under the old settlement amounted to seventeen. Mr. Thornton held that "it was better to make two than one circle of mauzas if there was a doubt of there being a distinguishing peculiarity," and he carried this principle somewhat to excess.

Fixation of rates.

31. In the fixation "of fair average rent-rates for each of the several denominations of soil in each of the circles into which the district has been classified" Mr. Thornton was met by the difficulty that even in those estates in which there were numerous non-proprietary cultivators rents were paid in kind, or in the case of a few crops by fixed money rates for each crop, irrespective of the soil in which they might be sown. These zabti or crop rates for the villages in each circle were easily ascertained, but the investigation regarding the value of the rental paid in grain was tedious and labourious.

Not only were estimates made of the produce in three or four villages of each circle at the spring harvest of 1840, but the kankút or crop estimate papers of fourteen years preceding 1841, referring to 413,650 acres, were obtained, and averages were taken for each circle. Mr. Thornton assumed, and with sufficient justice, "that only wheat, gram, and barley are grown to any considerable extent in every soil, whatever be the denomination." With reference to these three crops covering 40½ per cent. of the cultivated area, he had the detailed estimates for each kind of soil formed in the spring of 1840. For cane, cotton, chari, and maize, covering 17½ per cent. of the cultivated area, he had the known crop rates. For the remaining 42 per cent. of the crop area he had to follow the distribution of 1840. "All other articles besides wheat, barley, and gram, are almost exclusively confined to some one denomination of soil, and in the process the relative amount of the several rates for the crop grown in one or other soil was determined according to the proportions ascertained by the investigations of 1840." Now, although Mr. Thornton's statement was generally accurate, that, except the three principal cold-weather crops, particular crops were usually grown in particular soils, there were quite enough exceptions to exert a considerable influence upon the calculations. Thus, excluding crops for which crop rates are

ordinarily charged, 15 per cent. of the bhúr or sand area was covered with crops grown more or less generally in good land, while of the crops more distinctive of poor land, an appreciable proportion was grown in the better soils. There was in this way a decided tendency to raise the rates for the worst soil and to depress those calculated for the better soils. And as the division of the district into circles was not altogether so accurate as might have been the case had a detailed inspection followed measurement, and as in the very best circles second and even third class estates were included, the tendency of this method of fixing rates to raise the rates for the worst land and to lower those for the best land was increased.

32. But rent-rates ascertained in the manner described were not necessarily followed. "It will be observed, for instance" (Mr. Thornton writes), "that the revenue-rates on unirrigated ransli in Chapár, Púr, Tissa, and Nírgájni—among which the three last circles, speaking of their whole area generally, are certainly of inferior quality—vary from Re. 1-12-0 to Re. 2-1-0 per cultivated acre, while in the better parts of the district the rate in this soil seldom reaches Re. 1-7-0. Upon commencing the assessment of Chapár, after having gone nearly through the assessment of the whole district, I ventured on the experience I had obtained to lower arbitrarily; but the result was that the jama obtained by use of this modification was so much lower than from the other information collected appeared proper, that further investigation of the ransli land was necessary, and it fully bore out the fact that a high rate was applicable." Experience has shown that these rates were justified, but the same experience and the records of Mr. Thornton's settlement themselves show that the rates for other circles were extremely low.

Deviations from calculations by rent-rates.

33. It has been already noticed that there is in this district a distinct improvement in soil towards the south, especially along the western boundary of this tract; and although extreme prevalence of sand may lower rates in certain portions of some of the southern parganas, it is none the less unquestionable that even sand, when found in moderate quantities, bears higher rates than to the north. And there are sufficient data to show that this was the case thirty years ago as well as now, whereas the subjoined statement, in which the circles are arranged as they stand on the map, shows that Mr. Thornton's rates do not practically admit this unquestionable fact, and that in consequence those assumed for the southern parganas differ most widely from those of the adjoining parganas of Meerut. Indeed, the absolute neglect to institute any comparison between the rates of adjoining parganas in different districts has been productive of much inequality in assessments and of loss to Government. There is of course no more reason why adjoining parganas any more than adjoining circles should pay the same rates, but it is clear that the rates for similar soils in estates of similar quality should not vary excessively merely on account of a district boundary, which, moreover, in this case has followed no natural line, but has cut through strips of homogeneous upland and has divided the holdings of clans and the estates of proprietors.

Lowness of the rates assumed especially in southern parganas.

Pér.					Barampur.			
	Misan.	Rausli.	Dákar.	Bhúr.	Misan.	Rausli.	Dákar.	Bhúr.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Wet ...		No wet rates.				No wet rates.		
Dry ...	4 9 11	2 4 11	2 7 0	1 3 7 1 2 6	3 13 8	2 7 9	2 13 5	1 1 8

Chapár.				Nírgójni.				Bhákharheri.				
	Misan.	Rausli.	Dákar.	Bhúr.	Misan.	Rausli.	Dákar.	Bhúr.	Misan.	Rausli.	Dákar.	Bhúr.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Wet ...		No wet rates.			5 7 0	3 5 10	...	...		No wet rates.		
Dry ...	4 6 9	2 6 6	2 11 10	1 3 7 1 2 6	4 5 11	2 11 10	1 13 4	1 11 4	3 2 1	2 3 10	2 2 6	1 3 1

Muzaffarnagar.				Pachenda.				Ghur.				Tisah.			
Misan.	Rausli.	Dákar.	Bhúr.	Misan.	Rausli.	Dákar.	Bhúr.	Misan.	Rausli.	Dákar.	Bhúr.	Misan.	Rausli.	Dákar.	Bhúr.
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Wet, 4 10 4	3 7 5	3 1 3	1 8 6	4 11 9	4 6 11	2 4 7	1 11 11	4 11 9	2 6 6	2 3 0	1 8 7	4 9 10	2 15 0	2 7 0	1 8 3
Dry, 4 6 6	2 4 3	2 1 1	1 7 7	4 6 8	2 6 6	2 3 0	1 11 11	4 6 8	2 6 6	2 3 0	1 8 7	4 3 9	2 15 0	2 7 0	1 8 3

Pár Balaan.				Jauli.				Jánsath.				Sambalherah.	
Misan.	Rausli.	Dákar.	Bhúr.	Misan.	Rausli.	Dákar.	Bhúr.	Misan.	Rausli.	Dákar.	Bhúr.	(Meerut district)	
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Wet, 4 9 10	2 13 6	2 14 7	1 10 5	3 9 5	2 12 4	3 8 0	2 8 5	4 3 2	2 15 1	2 11 6	2 10 10	3 3 2 manured land.	
Dry, 3 13 6	2 4 1	2 0 7	1 4 0	3 3 3	2 0 8	1 7 9	1 1 4	3 8 5	2 0 6	1 13 9	1 6 10	1 9 7	

Khátauli.				Kheri Qoreshi.				Bhárah.	
Misan.	Rausli.	Dákar.	Bhúr.	Misan.	Rausli.	Dákar.	Bhúr.	(Meerut district.)	
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Wet ... 4 5 8	3 0 4	1 15 10	2 15 8	3 11 4	2 11 10	2 11 10	1 14 4	3 12 10 manured land	
Dry ... 2 14 0	1 14 8	1 10 0	1 7 3	2 7 9	2 1 10	2 0 4	1 6 0	2 0 0	

Sirdhanah.				Meerut.			Hastinapúr Niloha.	
Meerut district.							Meerut district.	
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
1st circle.	2nd circle.	3rd circle.	1st circle.	2nd circle.	3rd circle.	1st circle.	2nd circle.	
Wet ... 7 9 7	6 7 0	4 12 9	6 7 0	4 4 6	4 0 0	4 0 0	4 0 0 manured land.	
Dry ... 3 12 10	3 3 6	2 6 5	3 3 6	2 8 0	2 3 0	2 3 2		

Result of comparison of the rates of different circles.

34. A careful comparison of the rates of the various circles brings to light several peculiarities, for some of which it is difficult satisfactorily to account. The expense of irrigation might plausibly account for the small difference in the assumed rent-rates of wet and dry land in the northern parganas, if the smallness of that difference were uniform. But when we find that irrigation adds little or nothing to the value of misan, but enormously to the value of unmanured land, and more especially of bhúr; when we find the rates for dry land in the north higher than those for irrigated land in such a fertile easily irrigable circle as that of Jánsath, and when we look at the rates of the parganas immediately to the south of Jánsath and Khátauli, it is difficult to avoid the conclusion that in the southern parganas the rates assumed were low. For it is absolutely impossible that the land of Khátauli and Jánsath, so much more advanced even thirty years ago than the parganas to the north, should have been worth less, and it is incredible that the advantage of easy irrigation should not have made the irrigated land of Khátauli worth more instead of less than the unirrigated land of Chapár. Either the one set of rates must have been too high or the other greatly too low; that the latter was the case is indicated not only by the rates of adjoining parganas settled by other officers, but by the rates recorded in the papers of Mr. Thornton's settlement. As has been stated in the rent-rate report for Khátauli, these rates are far in excess of those assumed, and sufficiently bear out those fixed by Sir Henry Elliot for the adjoining pargana of Meerut. A final and convincing proof of the inadequacy of the rates assumed for the circles to the south is given by their application to the soil areas of the better villages, as recorded in the papers of the old settlement. The result shows that the better villages were assessed without any reference to these rates, which in some cases give little more than half of the rental that was assumed.

Rates unequal as well as low.

35. And in addition to being extremely low in the southern parganas, Mr. Thornton's rates had the defect of being necessarily inexact. Appendix I. to the printed report and Mr. Thornton's remarks combine to show that many crops which

are never grown without manure were cultivated in fair proportions in land entered unmanured ; and inaccuracies of this kind, the necessity of using an average kharif produce for every kind of soil, and the inclusion in most circles of very inferior as well as distinctly good villages, tended to equalize rates and to make those for the best lands too low and for the worst soils too high, to make the circle rates high for the poorer villages, and so needlessly low in the southern parganas, at all events for the best estates, that the assumed rates were not allowed to guide the assessments.

36. I have been obliged to undertake the ungracious task of stating prominently what I consider to be the defects of Mr. Thornton's system, because that officer was led to claim for his rates an absolute infallibility which was admitted by his immediate successors. In paragraph 29 of the printed report Mr. Thornton writes : " I consider that with perfect safety and propriety it might be declared that the rates for each circle as now given in No. 5 of the appendix to this report, with the exception of those for the five circles in the khádír of the Ganges, *need never be exceeded; and that the only two matters subject to subsequent examination should be the amount of mlsan and of irrigation.*" This conviction of the attainment of final and absolutely accurate results would have done no harm and need not have been seriously dealt with had Mr. Thornton's opinion on the subject not been adopted by his successors.

Necessity of foregoing criticism.

37. The sixth regular settlement then gave to the district moderate or low assessments for a term of twenty years. In Púr Chapár Mr. Thornton granted a reduction on the old assessment of the pargana, and in many of the most overburdened estates he gave distinct relief. In Bhúkarheri an enhancement of 20 per cent. was taken chiefly from the once backward estates which had improved and from the smaller mucararis which had come under re-assessment. In not a few of the most heavily assessed estates reductions were granted. In Muzaffarnagar an enhancement of 10 per cent., exclusive of gain from lapsed muáfis, was combined with an equalization of the demand and relief to the most heavily assessed eatates. Regarding Khátauli and Jánsath information is extremely scanty, but as far as can be ascertained, enhancements were considerable in the assessment of previously backward estates, while reductions were made in the case of the populous well-cultivated villages, which had long contributed more than a sufficient quota to the exchequer. But in these parganas there was great room for enhancement. Whatever terms may have been dealt out to the more distant possessions of the Sayyid families, the villages in which they lived and cultivated had been treated with the most marked consideration, and were in some cases held on nominal assessments. Revenue-free lands, too, were rapidly lapsing to the State, and in these two parganas alone contributed a sum of no less than Rs. 4,389.

General results of Mr. Thornton's settlement.

But, notwithstanding all enhancement, the assessment of these parganas remained more moderate than elsewhere, for the resettlement of deserted hamlets had improved the condition of many estates and a long period of tranquillity had tended to the improvement of agriculture, while in a tract fairly protected by wells constantly recurring famines would retard progress less than elsewhere on this side of the district.

38. The parganas of Bhúma and Sambalherah had been, as has already been mentioned, finally settled in 1835 by Mr. (afterwards Sir Henry) Elliot, who revised the work of Mr. Glyn, and the villages to the extreme south afterwards added to the new pargana of Bhúmah Sambalherah from Hastinapúr Niloha were settled by the same officer. Sir Henry Elliot in some cases distrusting the soil entries, in others apparently having none ready to his hand, assumed for purposes of assessment the following summary rates for wet and dry land :—

**Assessment of Bhúma
Sambalherah by Sir
Henry Elliot.**

						Wet.	Dry.
						Rs.	Rs.
Hastinapur Niloha	...	...	...	...	...	4 0 0	2 3 2
Bhubanah	...	...	...	...	...	3 12 10	2 0 0
Sambalherah	...	...	...	...	...	3 3 2	1 9 7

Sir Henry Elliot's system of assessment.

39. Sir Henry Elliot describes his method of calculating rent-rates in the following paragraph: "In a district where *batāi* chiefly prevails, and where, if money rates are in existence, they are formed merely by distributing the Government demand by *bachh* over a certain number of *bighas*, it is difficult to fix a satisfactory standard of payment for the various quality of soils. Enquiries, however, amongst *zemindars* and *patwāris*, and the conversion of average produce into the market values, enable the collector to approximate to a money rate which is as accurate as any one that a *zemindar* himself could form."

But Sir Henry Elliot distrusted minute classification of soils, "and adopted as a preferable method in every *pargana* a rate for irrigated and unirrigated land without specification of soil, allowing himself to be guided by the opinion of *zemindars* rather than rely totally upon the *khasras*." Rates thus framed were checked by comparison with the books of the *mucarari* of Raja Nain Singh, by the records of rent suits, and by application to estates generally acknowledged to be fully yet fairly assessed. But Sir Henry Elliot did not always follow his rent-rates, and especially in highly-assessed estates he did not think it necessary to be guided by them. "When a *mauzah* has hitherto paid its revenue with ease, and no cause whatever exists for abating it, except the fact of its paying a higher average than prevails in the neighbourhood, I have not thought it necessary to lower it."

Proportion of the assets taken by the State.

40. Sir Henry Elliot nominally "deducted 20 to 50 per cent. from the *jama-bandi*, according to the circumstances of each village," and professed to assess as a rule at 70 per cent.; but in many cases his assessments were terribly severe, and it is likely that the demand in the *parganas* assessed by him on this side of the present district of Muzaffarnagar approached on an average more nearly to 80 per cent. Mr. Thornton assessed the *parganas* included at that time in Muzaffarnagar at 65 per cent. of the assets, and the addition of one-half to the old *jama* of this tract will give a fair estimate of the assumed assets of thirty to forty years ago.

The two systems of assessment opposed to each other.

41. The systems of Mr. Thornton and of Sir Henry Elliot were diametrically opposed to each other. Mr. Thornton went into considerable detail in his soil entries, and calculated with great labour rent-rates for the various soils of many circles. Sir Henry Elliot, on the other hand, distrusted detailed calculations and preferred general rates applicable to larger circles. In this preference this distinguished officer was no doubt influenced by his earliest experiences in the district of Meerut, and the splendid and generally uniform fertility and high farming in *pargana* Chaprauli, is, it is likely, to some extent responsible for the extreme simplicity of method which commended itself to Sir Henry Elliot, and to a certain extent to his successors in the district. But it is unquestionable that a system of assessment which might work well enough in Chaprauli and in the similar *parganas* now in this district was wholly unsuited to a *pargana* like Bhūmah Sambalherah, in which ever varying proportions of sand would alter the average value of dry land even if the loam and sand had been throughout the tract of uniform quality. Sir Henry Elliot attached great importance to free and unreserved intercourse with the people, and to this rather than to his system may be attributed the general accuracy of his rates for particular soils; a generally applicable dry rate for *parganas* like Bhūmah and Sambalherah no system that was ever devised could possibly discover.

Moderation of the assessments in the southern *parganas*.

42. Mr. Thornton with a very different system appears to have obtained fair but slightly full rates, especially for the poorer soils and poorer circles in the north and central portion of the tract; but instead of raising his rates when he came to the southern *parganas* he lowered them, and we find side by side with the much higher rates of Meerut rates which are shown to be wrong by the assessments of many villages and by the records of Mr. Thornton's settlement. But it is hardly to be regretted that *parganas* Khātauli and Jānsath, in former days it would seem so seriously overassessed, should have enjoyed twenty years of moderate assessments, for even where Mr. Thornton's assessments most largely exceeded the amounts indicated

by his rates, they were with few exceptions moderate. And it is fortunate that estates which had once been so hard pressed by our assessments and system of collection, should have had an opportunity of recovering themselves. For very many the opportunity came too late: many estates had been sold, many more were mortgaged, and it is hard for a proprietor to recover his position when his land is in the hands of a grasping creditor, from whom in most cases it can be recovered only after an expensive lawsuit. But since 1841 it can at least be said that in the greater portion of this tract transfers have not been owing to the severity of the assessments, and only to a slight extent to the rigidity of our system. Sayyid extravagance, however, continued as reckless as ever, and during the period of Mr. Thornton's settlement one-third of the total area of this tract was transferred. But this portion of its history will be dealt with after the conclusion of this narrative of successive settlements.

43. Owing to the destruction of the records, it is impossible to trace with accuracy in all cases the reductions which have been made on account of land taken up for public purposes, and the additions to the land revenue on account of resumed revenue-free grants, but the subjoined statement shows the difference between the demand of the first and of the last year of Mr. Thornton's settlement:—

					1841.	1862.
					Rs. a. p.	Rs. a. p.
Púr Chapár	...	...	...	...	56,808 0 0	56,343 3 6
Muzaffarnagar	...	...	...	...	59,849 5 6	59,951 15 5
Bhúkarheri	...	...	...	...	47,001 0 0	48,202 7 0
Khátauli	...	...	...	...	68,171 2 0	65,913 14 0
Janli Jánsath	...	...	...	...	56,418 0 0	56,162 7 7
Bhúmah Sambalherah	...	...	...	...	35,715 0 0	36,390 0 0
Total					3,23,962 7 6	3,22,953 15 6

The old assessments fell upon the areas on which they were assessed at the following rates per acre:—

Of total area.	Of culturable and cultivated area.	Of cultivated area.
Rs. a. p.	Rs. a. p.	Rs. a. p.
0 14 5	1 2 2	1 7 5

44. Mr. Thornton's settlement followed close upon the famine of 1838, and it may be assumed that, following so closely after so terrible a drought, an officer assessing a dry tract would be duly influenced by the effects of so great a calamity. But Mr. Thornton is singularly silent on the subject, and it is probable that then as now, even in dry villages, the traces of a drought were soon effaced; but it is likely enough that the very large area of fallow is due in some measure to the drought which preceded measurements. In Bhúmah Sambalherah the severity of the drought was aggravated in many cases by the heaviness of the assessments, and the famine of 1838 was more severely felt. But for the full period for which Mr. Thornton's settlements were fixed this tract enjoyed comparative peace and prosperity. On the 29th April, 1854, the Ganges canal was opened, and from that year irrigation steadily increased and was gradually extended to the more distant villages. The canal, too, provided communication with the more distant districts to the east, and the construction of the grand trunk road through this tract secured easy communication with the markets both to the south and north. Before the scarcity of 1861, therefore, this portion of Muzaffarnagar was generally secured from the most ruinous effects of drought, and the canal and a metalled road afforded easy means of export to the south and east.

General prosperity of the tract during the period of settlement.

45. And in few parts of the country did the disorders of the mutiny inflict less serious or lasting injury. The great majority of the influential Sayyids remained on the side of order, the towns escaped from plunder, and the communities held their own. Here and there an unpopular Bania was robbed, or a Sayyid zemindar or lawless band of Gújars and Játs plundered hamlets or levied tribute, but this was more the case in the Ganges valley than in the upland. Confiscations were trifling in extent, aggregating only 2,635 acres in the whole tract east of the Káli, and loyal

Comparatively unimportant effects of mutiny and famine.

inhabitants of the eastern parganas were recompensed for their services by the grant of confiscated estates beyond the Hindan. The district officers maintained their position in Muzaffarnagar from first to last, and little was heard of the permanent injury caused by either mutiny or drought in the upland portion of the Ganges and Káli Doáb, until the settlement of the tract was challenged.

In May, 1861, the Commissioner of the division, writing to the Secretary of the Central Relief Committee at Agra, expressed his surprise at the flourishing aspect of the country through which he had passed during his cold-weather tour. He dwelt upon "the fertility resulting from irrigation," and stated that throughout the canal-irrigated tract from Púr to Muzaffarnagar, thence to Bhúkarheri, and from that southwards to Khatauli, he "found a continued sheet of fine wheat and barley, save on sandhills, and even in such places fair crops were to be found." The "dry and sandy tract" of 1841 had been changed into a country with plentiful irrigation supplied flush from the canal at a minimum expenditure of labour. To the northern parganas this brought better crops in ordinary seasons, and in years of drought security and in many cases unusual prosperity. In the southern parganas in which irrigation from wells had formerly been fairly general, irrigation had been largely extended, and the substitution of canal for well irrigation, undesirable in many respects, had the effect of economizing labour in many of the best villages, and of thus setting free for other agricultural work the men and cattle that had been toiling at the wells.

Improvement of the tract during Mr. Thornton's settlement.

46. As I shall have farther on to discuss at length the improvements which have taken place since Mr. Thornton's settlement in 1841, it is only necessary here to show shortly the main points which led to the disapproval of the assessments of Messrs. Martin and Grant, and for this purpose comparative irrigation statements, and, as far as they can be given, comparative crop statements, are the most clear and cogent arguments which can be adduced.

Comparative statement of areas.

Pargana.	Period.	Total area.	Assessable area.	Culturable.	Fallow.	CULTIVATED.		
						Wet.	Dry.	Total.
		Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Púr Chapár ...	1841	55,026	45,626	2,971	5,533	53	37,069	37,122
	1863	57,369	46,048	3,918	1,672	25,852	14,606	40,458
Bhúkarheri ...	1841	62,811	49,408	6,008	8,570	162	34,668	34,830
	1863	64,491	50,909	4,278	2,438	25,349	18,844	44,193
Muzaffarnagar ...	1841	68,144	47,957	3,886	4,213	3,133	36,726	39,858
	1863	69,538	50,245	3,334	4,994	21,664	20,253	41,917
Khátauli ...	1841	62,228	46,514	3,844	4,356	10,812	27,504	38,316
	1863	62,378	46,881	4,844	1,623	19,886	20,478	40,364
Jauli Jánsath ...	1841	61,922	54,824	4,851	6,233	6,273	37,467	43,740
	1863	61,971	54,600	3,778	2,659	18,564	30,199	48,763
Bhúmáhalherah ...	1841	48,715	39,932	3,883	3,492	1,200	26,357	27,557
	1863	48,863	39,573	2,402	2,900	8,125	26,146	34,271
Total ...	1841	358,846	284,263	30,443	32,397	21,633	199,790	221,423
	1863	364,430	288,206	21,954	16,286	119,440	130,526	249,966
Difference ...		+5,584	+3,943	-8,489	-16,111	+97,807	-69,264	+28,543

Comparative crop statement.

Pargana.	Period.	Sugar-cane.	Cotton.	Dhán or common rice.	Munji or finer rice.	Total kharif.	Wheat.	Barley.	Total rabi.	Assessment.
										Ra.
Púr Chapár, {	1841	1,485	1,114	1,485	...	20,046	10,765	1,856	17,076	56,343
	1863	3,266	1,348	732	204	22,852	10,433	3,370	17,606	59,250
Muzaffarnagar, {	1841	1,594	797	1,196	...	21,523	12,755	399	18,335	59,932
	1863	2,816	1,011	7,034	147	22,195	12,081	1,616	19,722	68,442
Bhúkarheri, {	1841	1,393	697	1,742	...	19,858	6,966	3,483	14,977	48,202
	1863	2,767	900	489	810	27,131	8,035	4,707	17,062	55,951
Khátauli ...	1841	1,916	1,149	1,149	...	21,457	11,495	383	16,869	65,914
	1863	4,393	1,256	987	284	22,254	10,333	585	18,110	66,311
Jánsath ...	1841	1,750	875	2,187	...	25,807	8,748	3,499	17,933	56,152
	1863	3,314	1,601	831	29	30,751	6,673	1,621	18,012	58,578
Total ...	1841	8,138	4,632	7,759	...	1,08,686	50,729	9,620	85,180	2,86,568
	1863	16,616	6,116	4,073	1,474	1,25,183	47,555	11,899	90,512	3,06,532
Difference ...		+8,478	+1,484	-3,686	+1,474	+16,497	-3,174	+2,279	+5,332	+21,969
Bhúmáhalherah {	1841			Cannot be ascer-	tained.					36,390
	1863	2,073	973	256	447	20,886	5,522	2,394	13,364	35,719

Notwithstanding the changes which had taken place during the period of Mr. Thornton's settlement, the improvement in communications, the enormous increase in the irrigated area, the rise in prices, the increase in population, and the great progress in agriculture, the assessments were but little raised, and of the small increase of Rs. 21,298, less than 7 per cent., a portion was owing to the lapse of revenue-free land about the period of settlement.

47. The reduction in the share of the assets taken by the State from two-thirds to one-half, however, renders all comparison between two settlements concluded on different principles unfair and misleading, and it is necessary to compare the assumed rentals and assumed rent-rates in order to obtain a correct view of the result of settlement operations. If for the whole tract an assessment at two-thirds of the assets be assumed, a land revenue amounting to Rs. 3,23,962-7-6 would involve a rental of Rs. 4,85,943, whereas the half-asset assessment fixed in 1863 points to a rental of Rs. 6,88,502. So far, then, there is nothing to show that the assessment of 1863 was insufficient, for it is not *prima facie* improbable that an increase of more than Rs. 2,00,000 might fairly represent the value of slightly increased cultivation amounting to 28,543 acres, and of the supply of irrigation for 97,807 acres previously dry. But, as has been already explained, there was no good reason for assuming that the rent-rates of the old settlement were so absolutely correct as they claimed to be, and it was notorious that in all but the most northerly pargana Mr. Thornton's assessment was low, and in the southern parganas distinctly so; still, notwithstanding the general reputation for leniency which the old settlement possessed, and notwithstanding the higher rates recorded in the papers of the old settlement, and the still higher rates assumed thirty years before for the adjoining parganas in Meerut, the rent-rates of Mr. Thornton's settlement were generally followed, and where they were exceeded, the rates were not, except in Khátauli, permitted to guide the assessments.

Comparison of rentals assumed by Mr. Thornton and by his successors.

48. Mr. Thornton's system, too, depended so much upon the accurate entry of mísan or manured land, that the application of his rates to soil areas carelessly recorded could not but yield unsatisfactory results. Mr. Thornton estimated that a cane crop in 5 per cent. of the cultivated area involved 16½ per cent. of mísan. Now in one pargana, Muzaffarnagar, in which the cane crop covered nearly 7 per cent. of the cultivated area, only 12 per cent. was recorded as mísan; in Khátauli barely twice the cane area was entered manured; and only in Púr Chapár and Bhúkarheri, in which parganas the rates did not guide the assessments, was the recorded area of mísan three times the area covered with sugarcane. In the whole tract under review the percentage of sugarcane was 8, and that of mísan, instead of being 26 as Mr. Thornton's proportions required, remained at 18, so that more than 20,000 acres which ought to have been mísan were recorded rausli; and even this estimate is too small, for, as will be shown later, a better description of rice grown ordinarily on manured land had been introduced, and was far more largely grown than the crop statistics indicate. The effect of these inaccurate soil entries varied in different parganas, but wherever the assessment followed the rates, the smallness of the mísan areas necessarily lowered the assessment. In Khátauli, the average assumed rate for wet land was lower than that assumed for the worst circle in the adjoining pargana of Meerut thirty years before. In Bhúkarheri, again, Mr. Thornton's *dry* rates when applied to the areas of the new settlement, whether irrigated or unirrigated, gave an assumed rental in excess of that taken for granted by the new demand, so that the supply of irrigation to 25,187 acres in a previously unirrigated pargana had been entirely left out of consideration. In Púr Chapár a similar calculation showed that, assuming the soil areas to be correct, a sum of Rs. 3,684 had been practically assumed as the increase in the value of land due to the irrigation of 25,799 acres.

Additional error entailed by inaccurate soil entries.

49. Considerations such as these, and the fact that throughout the six parganas rent-rates which towards the south fully confirmed those which had been found suitable to the adjoining parganas of Meerut thirty-five years before were found to prevail generally, led Government to disallow the settlement of the Ganges canal tract and

Revision of settlement ordered.

to order a revision. In this way the investigation with a view to permanent settlement which had been begun in 1868, led to the disapproval of the settlement of that portion of the district in which by far the greatest progress had been made.

Advantages and disadvantages of the course followed.

50. The fiscal history of the tract has now been brought down to the spring of 1870, when the orders of Government on the subject were issued ; but before turning to the settlement operations which were begun towards the close of that year, I would devote a few lines to the consideration of the advantages and disadvantages of the course that has been pursued. The revision of a settlement so soon after its completion is an operation which ought of course, if possible, to be avoided, for it involves much expenditure to Government and great annoyance to the people, and to compensate for these very distinct disadvantages very great benefits must be obtained. Fortunately the injury caused to agriculture by the duration of settlement in a canal-irrigated tract such as this was comparatively trifling, for the people know well enough that in the majority of cases the areas of the best crops can be ascertained for a considerable number of years by consulting the records of irrigation, and the profits of a year of drought and high prices are so great that no thought of the future is powerful enough to overcome the anxiety to reap the profits within the reach of the cultivator. The experience, moreover, of landlords and tenants at the recent settlement had convinced both parties that to defraud Government had its disadvantages. Many a landlord, after scheming to obtain a low assessment, had been horrified to find that the settlement officer felt bound to consider his assessment a half-asset one, and had when fixing rents simply doubled it to obtain the rent-roll. In this way a landlord not infrequently lost seriously by his success, for the profits that were fixed for him were a percentage on an insufficient revenue demand. The cultivators, on the other hand, had discovered that it was unwise to defer questions of rights and rents until after settlement, for then the entries of the settlement records were apt to be summarily upheld, and many a man induced by his landlord to refrain from inconvenient applications during settlement found that his opportunity had been lost.

Both classes of the community, therefore, seemed on the whole anxious to obtain a definite settlement of their claims rather than to unduly restrict the revenue of the State ; and whether it was owing to the natural tendency to ask for more than was expected, to enmity to occupancy right, or to the too moderate estimate of the value of land made by the assessing officer, the landlord's claims made before assessments were given out were generally far in excess of those which were eventually allowed.

Unsatisfactory nature of the work.

51. I do not think, then, that the cultivation of the best crops was to any great extent purposely neglected during settlement owing to the influence of the landlords, although in some instances this was no doubt done in order to obtain low rents at the landlord's expense. But although these objections to a revision of settlement were not felt much in this tract, there was something extremely unsatisfactory in the work. Entering upon the re-settlement of a new district, a settlement officer may fairly feel that his presence is required. The old maps and records are to a great extent out of date ; the village papers have become more or less crowded with errors time has worked many changes, and assessments, even if they had been originally perfect, must have become unequal ; new questions have arisen which call for adjustment, and after a twenty or thirty years interval a re-compilation of the records is, as our system has hitherto been administered, expedient, altogether irrespective of the enhancement or reduction of the Government demand. But after an interval of five years the people at large look upon the re-opening of a settlement as an unmitigated nuisance. Some no doubt are glad of a fresh opportunity of preferring claims most of which have been disposed of before, and others have grievances which, it may be, are worthy of attention, but which might be righted in a less costly manner. On the whole, however, a revision after so short an interval is distinctly unpopular with the people, and must prove irksome and unsatisfactory to the officer who undertakes it.

52. On the other hand, experience has shown how thoroughly unsatisfactory and unsafe a revision on an untrustworthy basis must necessarily be; and with the experience of such officers as the late Sir Henry Elliot and of the late Mr. Wynne in the parganas adjoining this tract on the south and north before me, I can hardly regret that a detailed revision should have been determined upon, and that I should have been spared the doubts and difficulties which rendered the work, at different periods, of men both above average capacity and one of altogether exceptional ability, either in itself unsatisfactory or at least incapable of satisfactory explanation. For whatever may be the case in Meerut, there can, I think, be no question that not a few of Sir Henry Elliot's assessments in this district were from the beginning unrealizable, and that even before the introduction of irrigation in a tract with ever-varying proportions and qualities of sand, no officer of whatever ability, power of observation, and faculty of acquiring information, could effect a satisfactory and equal settlement, except on the basis of accurately recorded soil areas. For in no branch of administration is it more true than in settlement that "with equal natural ability, equal study, and equal experience, the man who is provided with a good method will outstrip him who employs a feeble or defective method, or who trusts to mere common sense;" and those who follow in the footsteps of Sir Henry Elliot require all the help which a better method, more accurate details, and more time for the study of local peculiarities can afford, to enable them to cope with difficulties which his altogether exceptional ability and professional knowledge failed to overcome.

Necessity for accurately prepared statistics.

53. And costly, tedious, and unsatisfactory as this revision has in many respects proved, it could hardly be avoided. Either the Meerut assessments or the Muzaffarnagar assessments were clearly and seriously wrong, and investigation proved that the demand in Muzaffarnagar was needlessly low, and that the rates on which it had been based were shown to have been wrong by rents prevailing in the tract itself and by comparison with the rent and revenue rates of all surrounding parganas. And further experience has proved that the Meerut assessments, so far from being severe, have throughout leaned to the side of moderation, and in numerous instances have proved to be extraordinarily light. And it is almost certain that succeeding years will bring still further proof of the necessity of the course which was adopted.

Necessity for revision.

54. In the complete destruction of records at the mutiny there passed away all accurate information regarding the coercive processes for the earlier periods of Mr. Thornton's settlement, and for the later periods the number of coercive processes depends as much on the system followed as on the normal pressure of the demand or on exceptional calamities of seasons. It was found in the valley portions of this district that the ruin of the extensive tracts from marsh and floods had left no trace in the coercive processes of the period, and in all districts there is a tendency to avoid processes which have to be reported on, and to substitute those which are at once prompt, easy, and effective. In the event of difficulty in collection, the easiest process is for the tahsildar to force either sale or mortgage; and when this is done, as was the case in the valley estates, overassessment or deterioration increases the number of private transfers, but leaves no mark in the records of coercive processes. But as a rule, coercive processes were not much required, and even if their history could have been made complete, it would not have been of any practical use.

Coercive processes.

55. The wholesale destruction of records has also rendered unusually difficult the compilation of satisfactory statistics regarding transfers. The statements compiled at the time of Mr. Martin's settlement were compiled for whole parganas, and it was found impossible with any approach to accuracy to do the work over again for the upland portions of parganas alone, and it was necessary to rest satisfied with the following statement, which for purposes of comparison at all events is not always satisfactory:—

Transfers.

Pargana.		TRANSFER BY PRIVATE SALE AND MORTGAGE.						
		Area in acres.	Jama.	Whole estate.	Portions.	area in acres.	Price.	Jama.
			Rs.				Rs a. p.	Rs. a. p.
Púr Chapár during period of 20 years from 1842 to 1861.	Pargana statistics at Mr. Thornton's settlement in 1841.	58,360	57,027	...	...	5,911	41,393 14 0	4,810 4 3
					Price per acre ...	7 0 1	9 years' jama.	
During period of 9 years from 1862 to 1870.	Pargana statistics at settlement in 1863.	58,699	59,730	...	30 8 6 9 17	2,314	27,795 4 0	3,183 3 10
					Price per acre ...	11 13 9	9 years' jama.	
	Total ...	...	...	...	...	8,255	69,191 2 0	7,993 8 1
					Price per acre ...	8 6 1	9 years' jama.	
Muzaffarnagar during 20 years.	At Mr. Thornton's settlement in 1841.	68,144	...	...	...	11,031	1,21,380 0 0	4,868 1 0
					Price per acre ...	11 0 3	25 years' jama.	
During 9 years ...	At settlement in 1863,	69,538	...	...	79 10 8 3 10	4,308	86,491 13 8	5,845 5 5
					Price per acre ..	20 1 3	15 years' jama.	
	Total ...	...	...	...	...	15,322	2,07,871 13 8	10,713 6 5
					Price per acre ...	13 9 0	19 years' jama.	
Bhúkarheri during 20 years.	At Mr. Thornton's settlement in 1841.	32,654	...	1	338 0 7 18 0	17,532	67,527 10 0	13,009 11 10
					Price per acre ...	3 13 5	5 years' jama.	
During 9 years ...	At settlement in 1863,	64,110	...	1	121 1 0 14 0	8,695	1,15,792 0 0	6,566 12 4
					Price per acre ...	13 5 1	17 years' jama.	
	Total ...	...	...	...	...	26,277	1,83,319 10 0	19,666 8 2
					Price per acre ...	7 11 9	9 years' jama.	
Jauli Jánsath during 20 years.	At Mr. Thornton's settlement in 1841.	60,765	56,070	2	228 6 14 12 15	10,796	75,885 0 0	10,691 5 6
					Price per acre ...	7 0 6	7 years' jama.	
During 9 years ...	At settlement in 1863,	60,839	56,578	...	171 7 13 5 3	6,351	1,10,158 8 9	7,230 9 2
					Price per acre ...	17 5 6	15 years' jama.	
	Total ...	...	...	...	...	17,147	1,86,043 8 9	17,921 14 8
					Price per acre ...	10 13 7	10 years' jama.	
Khátauli during 20 years.	At Mr. Thornton's settlement in 1841.	53,257	65,913	9	927 0 16 17 13	12,297	1,39,797 8 0	14,335 5 2
					Price per acre ..	10 12 9	9 years' jama.	
During 9 years. ...	At settlement in 1863,	53,279	66,311	2	132 15 0 17 19	6,430	1,79,469 0 3	7,482 4 8
					Price per acre ...	27 14 7	24 years' jama.	
	Total ...	...	...	...	...	18,727	3,12,266 8 3	22,017 9 10
					Price per acre ...	16 10 10	14 years' jama.	
Bhúmah Sambalherah during 20 years.	At Mr. Thornton's settlement in 1841.	79,191	...	3	263 0 16 4 0	22,365	98,019 0 0	8,834 1 3
					Price per acre ...	4 6 1	11 years' jama.	
During 9 years ...	At settlement in 1863,	48,831	...	...	107 15 1 3 13	8,262	56,732 5 5	4,983 2 3
					Price per acre ...	6 13 10	11 years' jama.	
	Total ..	...	...	...	...	30,627	1,54,751 5 9	13,817 3 6
					Price per acre ...	15 0 10	11 years' jama.	
Total of six parganas, during 20 years.	Statistics at Mr. Thornton's settlement in 1841.	4,02,371	...	15	...	79,972	5,37,005 0 0	56,748 13 0
					Price per acre ...	6 11 6	91 years' jama.	
During 9 years ...	Statistics at settlement in 1863.	3,55,296	...	3	442 17 10 14 2	36,390	5,76,439 0 5	35,361 5 6
					Price per acre ...	15 13 5	16 years' jama.	
	Total ...	...	...	...	...	1,16,362	1,113,444 0 5	92,130 2 2
					Price per acre ...	9 9 1	12 years' jama.	

NOTE.—In the transfer statement for 20 years of parganas Púr Chapur, Bhúkarheri, and Bhúmah

ment of transfers.

TRANSFER BY PUBLIC SALE.					TOTAL TRANSFERS					EXEMPT FROM TRANSFER.	
Whole estate.	Portions.	Area in acres.	Price.	Jama.	Whole estate	Portions.	Area in acres.	Price.	Jama.	Area in acres.	Jama.
			Rs. s. g.	Rs. s. p.				Rs. s. p.	Rs. s. p.		
...	...	3,513	28,887 12 9	5,564 11 2	...	...	9,484	70,283 10 9	10,374 15 5	48,926	
...	Price per acre ...	8 3 2	5 years' jama,	...	...	Price per acre ...	7 7 3	7 years' jama.	...	...	...
...	16 5 1 11 9	1,110	12,157 7 5	1,577 11 6	...	46 13 8 1 6	3,454	39,952 11 5	4,763 15 4	55,245	
...	Price per acre ..	10 15 3	8 years' jama,	...	...	Price per acre ...	11 9 1	8 years' jama.	...	...	...
...	...	4,633	41,045 4 2	7,143 6 8	...	...	12,888	1,10,236 6 2	15,135 14 9		
...	Price per acre ...	8 13 9	6 years' jama,	...	...	Price per acre ...	8 8 10	7 years' jama.	...	...	...
...	...	7,385	53,199 0 0	5,682 10 6	...	...	18,356	1,74,579 0 0	10,550 11 6	49,788	
...	Price per acre ...	7 4 1	9 years' jama,	...	...	Price per acre ..	9 8 2	17 years' jama.	...	...	...
...	9 12 17 12 7	1,173	14,807 2 11	1,444 4 6	...	89 3 5 15 17	5,481	1,01,299 0 7	7,289 9 11	64,057	
...	Price per acre ...	12 9 11	10 years' jama	...	...	Price per acre ...	18 7 9	14 years' jama.	...	...	...
...	...	8 508	68,006 2 11	7,126 15 0	...	...	23,837	2,75,878 0 7	17,840 5 5	45,701	
...	Price per acre ...	7 15 10	10 years' jama	...	...	Price per acre ...	19 15 0	15 years' jama.	...	...	...
3 219 8 6 16 3	19,039	58,364 3 3	1,1516 1 11	4 557 8 14 14 3	36,621	1,25,891 13 3	24,525 13 9	46,033			
...	Price per acre ...	3 1 1	5 years' jama,	...	...	Price per acre ...	3 6 8	5 years' jama.	...	...	...
...	24 4 15 16 15	862	20,744 14 3	974 4 11	1 145 5 16 10 15	9,557	1,36,536 14 3	7,631 1 3	54,558		
...	Price per acre ...	24 1 1	21 years' jama,	...	...	Price per acre ...	14 4 7	18 years' jama.	...	...	...
...	...	19,901	79,109 1 6	12,490 6 10	...	...	46,178	2,62,428 11 6	32,156 15 0		
...	Price per acre ...	8 15 7	6 years' jama,	...	...	Price per acre ...	5 10 11	8 years' jama.	...	...	...
...	56 12 5 5 11	1461	17,375 0 0	1,904 11 1	2 284 18 19 18 8	12,257	98,260 0 0	12,596 0 7	48,508		
...	Price per acre ...	11 14 3	9 years' jama,	...	...	Price per acre ...	7 9 9	7 years' jama.	...	...	...
...	31 10 0 1 14	775	7,468 0 0	714 2 0	...	202 17 13 6 17	7,126	1,17,626 8 9	7,944 11 2	53,713	
...	Price per acre ...	9 10 2	10 years' jama	...	...	Price per acre ...	16 8 1	15 years' jama.	...	...	...
...	...	2,386	24,843 0 0	2,618 13 1	...	...	19,383	2,10,286 8 9	20,540 11 9	41,456	
...	Price per acre ...	11 1 9	9 years' jama,	...	...	Price per acre ...	10 14 1	10 years' jama.	...	...	...
10 312 2 17 1 15	15,657	1,89,734 14 0	32,041 9 10	19 539 3 13 19 8	27,954	3,22,532 6 0	36,576 15 0	25,503			
...	Price per acre ...	12 1 11	9 years' jama,	...	...	Price per acre ...	11 8 7	9 years' jama.	...	...	...
...	92 7 19 16 10	3,813	71,607 8 3	5,299 3 2	2 225 3 0 14 9	10,243	2,50,471 8 6	12,781 7 10	43,036		
...	Price per acre ...	18 9 11	13 years' jama	...	...	Price per acre ...	24 7 3	20 years' jama.	...	...	...
...	...	19,470	2,60,737 6 3	27,340 13 0	...	...	38,197	5,73,003 14 6	49,358 6 10	15,082	
...	Price per acre ...	13 6 3	10 years' jama	...	...	Price per acre ...	15 0 0	12 years' jama.	...	...	...
1 122 14 4 0 0	9,431	34,595 6 0	4,017 7 5	4 385 15 0 4 0	31,796	1,32,614 6 0	12,861 8 8	47,395			
...	Price per acre ...	3 10 8	9 years' jama,	...	...	Price per acre ...	4 2 9	10 years' jama.	...	...	...
...	23 18 14 0 10	862	10,682 0 0	743 14 6	...	131 13 15 4 3	9,124	47,414 5 9	5,727 0 9	39,707	
...	Price per acre ...	12 6 3	14 years' jama,	...	...	Price per acre ..	7 6 1	12 years' jama.	...	...	...
...	...	10,293	45,277 6 0	4,761 5 11	...	...	40,920	2,00,028 11 9	18,578 9 5		
...	Price per acre ...	4 6 5	10 years' jama,	...	...	Price per acre ...	4 14 3	11 years' jama.	...	...	...
...	...	56,446	3,82,156 4 2	50,727 3 11	...	...	1,36,418	9,19,161 4 0	1,07,476 0 11	2,65,953	
...	Price per acre ...	6 12 4	7 years' jama,	...	...	Price per acre ...	6 11 10	6 years' jama.	...	...	...
...	197 19 8 19 5	8,595	1,36,862 0 10	10,753 8 7	...	840 16 19 13 7	44,985	7,13,301 1 3	46,134 14 3	3,10,311	
...	...	15 14 9	13 years' jama,	...	...	...	15 13 2	15 years' jama.	...	...	...
...	...	65,041	5,19,018 4 10	61,480 12 6	...	...	1,81,403	16,32,462 5 3	1,53,610 15 2		
...	Price per acre ...	7 15 8	8 years' jama,	...	...	Price per acre ...	9 0 0	11 years' jama.	...	...	...

Sambalherah, the transfers in valley estates are also included, but those for 9 years are for upland villages alone.

Large area affected by transfers not due to assessments.

56. The total amount of land transferred has been very great, amounting to more than a quarter of the total area during the twenty years of Mr. Thornton's settlement, and to nearly one-eighth in the nine subsequent years. But in a tract owned for the most part by Sayyids, extensive transfers often indicate only the impecuniosity of the sellers, and have no necessary reference to the incidence of the revenue. Transfers have continued during a settlement which was proverbially light, and at prices which prove that the assessments leave a large margin of profits. In such cases the best test of the fairness of the demand is that of the prices which have been obtained, and in all parganas the assessments stand the test in a manner which shows that the demand cannot have been otherwise than moderate. And on the whole prices show a distinct advance, although in some parganas there are anomalies, as in Púr Chapár, where in the case of private transfers proportion of the price to the revenue is the same in the latter period as in the earlier one; and in Muzaffarnagar, where it is considerably less. The increase in the price per acre may be attributed partly to the exclusion from the statistics of the later period of the estates in the Ganges valley, but is in a great measure owing to the greater intrinsic value of land when supplied with irrigation from the canal, and the very substantial rise in the proportion of the price obtained in the later period to the land revenue evinces the moderation with which the demand has been fixed. And there can be little question that the price of land was kept from rising still higher during the latter period by the circumstance that the assessments were never sanctioned, and after a time remained in force, only pending revision.

The largely enhanced assessments that were fixed in consequence of the present revision did not on this ground exercise a necessarily unfavourable influence on the price of land. The new demand diminished profits, but it brought certainty and put an end to the suspense which had prevailed; and it is confidently believed that the price of land is now higher than before, and it is certain that even during settlement prices amounting to from twenty to thirty times the Government demand were easily obtained for canal-irrigated estates of only average quality.

Effect of transfers on the position of the Sayyids.

57. The effect of transfers on the position of the Sayyids, the chief landowning class in this tract, is shown as follows :—

Pargana.	Total area.	Area owned by other castes at conquest.	Area in the hands of Sayyids at conquest.	Loss by transfer to other castes.	Area now in the hands of Sayyids.
	Acres.	Acres.	Acres.	Acres.	Acres.
Púr Chapár... ..	54,152	51,903	2,249	138	2,111
Muzaffarnagar	59,278	6,795	52,483	35,865	16,618
Bhúkarheri	62,493	18,749	43,744	18,726	25,018
Jánsath	60,828	1,490	59,338	16,233	43,105
Khatauli	53,417	12,404	41,013	23,190	12,823
Bhúmáh Sambalherah ...	48,871	8,411	40,460	15,475	24,985
Total	339,039	99,752	239,287	114,627	124,660

Transfers to new classes of proprietors.

58. The subjoined statement, compiled in accordance with the orders of Government, shows to what extent land has passed into the hands of persons who do not belong to the landowning classes :—

Pargana.	Total area.	Deduct area confiscated during rebellion.	Remain- ing area.	Year.	Area owned by persons deriving their subsistence from land.	Percent- age.	Area owned by others than those subsisting on land.	Per- centage.
	Acres.	Acres.	Acres.		Acres.		Acres.	
Jánsath ...	61,146	...	61,146	1840	51,820	85	9,326	15
	...	...	...	1850	...	...	...	...
	60,844	45	60,799	1860	50,122	82	10,607	16
	60,816	...	60,816	1870	49,962	82	10,854	18
	60,702	...	60,702	Present revision.	50,607	83	10,155	17
Khátauli ...	56,519	...	56,519	1840	46,046	81½	10,473	18½
	...	...	...	1850	...	...	...	...
	53,977	975	53,002	1860	39,127	74	13,875	26
	53,432	...	53,432	1870	39,563	74	13,869	26
	53,407	...	53,407	Present revision.	39,308	73	14,199	27
Bhúkarheri ...	75,810	...	75,810	1840	61,750	81½	14,060	18½
	...	...	...	1850	...	...	...	...
	76,436	986	75,450	1860	43,603	58	31,847	42
	77,755	...	77,755	1870	44,556	57½	33,199	42½
Upland under revision, Khádír not subject to revision.	62,351	...	62,351		43,002	69	19,349	31
	15,001	...	15,001	Present revision.	5,150	34½	9,851	65½
Total ...	77,252	...	77,252		48,152	62½	29,100	37½
Bhúmah Sambalherah, ...	79,475	...	79,475	1840	68,810	86½	10,665	13½
	...	...	...	1850	...	...	...	...
	82,648	116	82,532	1860	59,398	71½	23,134	28½
	82,062	...	82,062	1870	57,961	70½	24,101	29½
Upland Khádír ...	43,565	...	43,565		33,411	76½	10,154	23½
	32,697	...	32,697	Present revision.	22,987	70½	9,710	29½
Total ...	76,262	...	76,262		56,398	73½	19,864	26½
Muzaffarnagar ...	56,263	...	56,263	1840	45,995	82	10,268	18
	...	...	...	1850	...	...	...	...
	56,242	421	55,821	1860	35,393	63½	20,428	36½
	57,825	...	57,825	1870	37,817	65½	20,008	34½
	56,926	...	56,926	Present revision.	39,932	67½	18,993	32½
Pér Chapár ...	55,894	...	55,894	1840	46,364	83	9,530	17
	...	...	...	1850	...	...	...	...
	55,868	292	55,596	1860	45,058	81	10,538	19
	55,827	...	55,827	1870	43,863	77	11,964	23
Upland under revision, Khádír not subject to revision.	53,221	...	53,221		44,139	83½	9,082	16½
	3,210	...	3,210	Present revision.	2,305	69½	1,005	30½
Total ...	56,531	...	56,531		46,444	82½	10,087	17½
	385,107	...	385,107	1840	320,785	...	64,322	...
	...	...	...	1850	...	...	...	...
	385,055	2,835	382,220	1860	272,781	71	1,10,449	29
	387,717	...	387,717	1870	273,742	70	1,13,975	30
Upland ...	332,132	...	332,132	Present revision.	250,300	75	81,832	25
Khádír ...	51,008	...	51,008	...	30,442	59	20,566	41
Total ...	383,140	...	383,140	...	280,742	73	102,398	27

59. A comparison of these statements shows that not a little of the land lost by the Sayyids has gone to swell the estates of other landholders and has not established a new body of proprietors.

Re ks on transfers in the different parganas.

In pargana Khátauli only the lesser Sayyids have in any way held their own, but Ját and Taga communities purchased seven estates early in our rule, and the property alienated during the period of Mr. Thornton's settlement passed for the most part into the hands of the Nawáb of Karnál, and in the most recent transfers of all the wealthy Ját family of Maulaheri in Muzaffarnagar has been the chief purchaser. The Sayyids of Jánsath have also been considerable purchasers of the land of their improvident brethren. In this way, although transfers have been very numerous, the trading classes have not acquired very much land, and have in late years made but little advance.

Khátauli.

In Jánsath there have been fewer transfers, but the maháján family of Talrah early got a footing in the pargana, and on their decay the lands which they had acquired fell for the most part into the hands of another Maháján family which had prospered

Jánsath.

under the protection of the Jānsath Sayyids. Here, as in Khātauli, the chief purchases by the trading classes were made early in our administration. The chief Sayyid family in the pargana has not been so consistent in its career of extravagance as its neighbours of Khātauli and Muzaffarnagar, whose spendthrift traditions came down unbroken from the days when their ancestors were ministers of the empire ; and recently at all events the chief Sayyid family of Jānsath has been distinguished for careful management and an absence of foolish ostentation, but unfortunately it seems destined after avoiding so successfully the Scylla of extravagance, to fall into the equally fatal danger of family litigation. In the meantime, however, the chief family of the Jānsath Sayyids has purchased very largely the land of other less successful houses, and as long as it maintains its present position outsiders are not likely to make much way in this pargana, the less so that the enriched and ennobled branch of the Jauli Sayyids has begun to acquire land in the neighbourhood of their ancestral village. For the last thirty years the hereditary laudholding classes have maintained their ground.

Bhūkarheri.

In Bhūkarheri the Sayyids of Mornah and Tissah have lost much, and the influence of the Landhaurah Rāja made this pargana an early prey to the influence of the family which held the office of treasurer to the Rāja ; and while in other parganas the lesser Sayyids have fairly held their own, in Bhūkarheri they have vied with the once grand houses in the rapidity of their decay. The Sayyids of Sambalherah however have purchased largely, and since 1840 the Sayyids of Tissah have recovered much of their property. The proportion of land in the khādir lost to the landowning classes is great, but is not much to be wondered at or lamented. Landowning in the khādir is now at all events a risky speculation more suited to the Banias than to the Sayyid. Improvement by the landlords is hardly to be looked for ; oppression of the cultivators on the other hand is not much to be feared in a tract in which tenants are so sought after that they are masters of the situation ; and when the circumstances of the people necessitate constant advances, and the uncertainty of the produce is so great, the small money-lender is probably as good a landlord as any one else would be, for his own immediate interest keeps him from being tyrannical.

Bhūmah Sambalherah.

In Bhūmah Sambalherah the khādir was owned by many petty landlords who, living close by, have been able to manage the tract, which, moreover, has not deteriorated so much as the khādir to the north. In the upland the severe assessment of a dry pargana must in any case have caused many transfers ; and in the branch of the Mīranpur Sayyids which rose to distinction under Mahammad Shāh after the fall of the Sayyids of Jānsath, this pargana possessed a family with ruinously grand traditions.

Muzaffarnagar.

In pargana Muzaffarnagar the Nawāb of Karnāl, the representative of the chief who held this pargana at the conquest, has acquired much land from the ruined descendants of Khānjahān, but both in early and in recent times Mahājans have made large purchases.

Pūr Chapār.

In Pūr Chapār as in Bhūkarheri the Mahājan family which held the office of treasurer to the Gūjar Rāja of Landhaurah, obtained an early footing by purchase of the not very assured rights of the Sayyids of Jānsath, who have since parted with the remnant of their property in this pargana. Some, too, of the suddenly constituted proprietors with whom settlements were made on the death of the Gūjar Rāja early fell into the hands of the money-lenders, but since the construction of the canal Jāts and Tagas have more than held their own, and even Gūjars have lost but little, and the loss of the ruined khādir is at all events little to be regretted.

Transfers chiefly affected by caste of proprietors.

60. In these parganas, as throughout the district, transfers have been least numerous where village communities owned most of the land, and it is likely that even if our assessments had always been moderate and our method of collection been more considerate than it has been, transfers of the property of Sayyids would have been exceedingly numerous. In many estates, more especially in the northern and eastern parganas, none but the most industrious and thrifty proprietors could pay through a series of years the high assessments, the collection of which was so rigidly

enforced ; and although Ját and Taga communities managed to do this, the failure of less model agriculturists was none the less inevitable, and the transfer of many Sayyid properties may in this way be attributed to high assessments and to the rigidity of our system of collection. But it is likely that if more Sayyids had escaped the earlier dangers, the chief present result would have been that more would have survived to fall a prey to their own reckless extravagance, which has in late years maintained the old frequency of transfers under assessments which have almost invariably been moderate or low. Transfers are likely to be less frequent in future because so many of the poorest Sayyids have now lost their land ; but reckless extravagance and embittered litigation will no doubt be as ruinous as ever, although the area that is especially likely to be affected by these influences, so peculiarly strong in the case of Sayyids, is smaller than it was.

61. With the exception of Sayyids and to a certain extent of Patháns also, the other proprietary castes have more than held their own since the beginning of our rule, and have not suffered in recent years. Transfers must of course take place, and in the best communities there are some unthrifty or unfortunate co-sharers whose lands become overburdened with debt, and even the best members of the best communities have their moments of recklessness, and however untiring they may be at their work, however careful in their ordinary management, occasions are certain to arise when the inexorable demands of custom will drive them into extravagant expenditure.

Hindu communities have held their ground.

That the improvident classes alone have suffered very severely is of itself sufficient to indicate that, as a rule, severity of assessment has had comparatively little to do with transfers, and the fact that the proprietary communities in Púr Chapár have stood their ground so well is a proof that, even under severe assessments, collected with unbending severity, hard-working thrifty communities were able to pay their way.

Of all castes the Tagas cling most resolutely to their land. The ineptitude for self-government of a Ját community often mars its efficiency in keeping as well as in acquiring land, while Rájputs and Gújars have now lost much of the security which their old character for turbulence gave them. In industrious and successful agriculture some Gújar communities come near to the best in the district, and pay as high rents and as high a revenue as their neighbours, but on the whole they have in most parganas lost more land than communities of other castes. Less industrious as a class than Játas or Tagas, they are as a rule an easier and safer prey than Rájputs, and when reduced to the position of cultivators they are less intractable and less mindful of their real or fancied wrongs.

62. And turning to the new class which has acquired land, justice compels me to admit that in this district the Banias have on the whole shown themselves to be no worse than proprietors of other castes. Almost without any exception large proprietors have done little for their land, and Banias, if they do nothing more, generally manage to settle hamlets where population is deficient. It is only the smaller Bania landlords that have time for detailed oppression, and the worst of these are certainly bad enough ; they treat their tenants as they do their debtors ; their chief endeavour is to get them more and more into their hands, to reduce the occupancy tenant to the position of a tenant-at-will, and if he is then troublesome, i. e., more independent than the cringing Chamár, to oust him from the village. But the worst petty Bania proprietor is equalled in harshness and surpassed in courage and determination by the bad Sayyid or Pathán landlord, and except that people resent oppression on the part of a new tyrant more than they do that of an old one, it is likely that the unprejudiced and unprotected cultivator would find little to choose between the two—between the new landlord and the old. The protected tenant, on the other hand, is safer with the old landlord, who has influence enough to obtain from the tenant the not very valuable but highly prized presents of hay and straw, fuel, molasses, &c., upon which in many villages the Bania can only count when the tenant

The new class of proprietors.

is deprived of his rights. It is probably from the same cause, the feeling of the comparative security of their influence, that Sayyid landlords often allow to their tenants a freedom in building and in planting which the Bania would never cheerfully yield ; and on the whole the old proprietor, if when roused he is a more violent, is a less insidious enemy than the new, and when he is on good terms with his tenants is a more generous and kindlier friend.

The evil of transfers
from resident proprietors

63. But all transfers of the ownership of land from cultivating proprietors form a serious hardship, and it is much to be regretted that they have not been more generally avoided. It matters comparatively little whether one absentee landlord succeeds another ; but when the proprietor who has lost his rights lingers on in his ancestral village, reduced in circumstances and degraded in position, pondering over his misfortunes, he is an unquestionable element of discontent. Recent legislation has in some degree ameliorated the position of ex-proprietors for the future, but nothing unfortunately was done for those who had already lost their land, many of whom even in this district had succumbed to the revenue system of our Government as much as to accident or their own extravagance.

CHAPTER III.

COMPARISON OF PRESENT AND FORMER CONDITION OF TRACT UNDER REPORT.

As the district had been so recently surveyed, it was not necessary to prepare new maps; and when the work of revision was begun in October, 1870, it was not supposed that the correction of the maps of 1862 would prove to be so tedious and troublesome as it has been. But even in a highly cultivated tract the changes in the form and size of fields are incessant. Where the land is good, division on inheritance and even the partition of fields for the convenience of cultivation change the number and the size of fields throughout a village in a very few years; and where the land is poor, and especially where it is sandy, and is cultivated by tenants without occupancy right, the boundaries of fields are changed almost year by year.

Correction of maps.

In this way the task of correcting the maps of Mr. Martin's settlement proved to be much more onerous than was looked for, and in the case of many villages the corrections in red ink almost amounted to a re-survey. But if this portion of the work was both more tedious and more expensive than was expected, its completion has been of considerable immediate advantage, for an antiquated map of the highly cultivated, canal-irrigated land necessitates constant re-measurement by the officials of the Irrigation Department.

2. But the real necessity of a correction of the maps arose from the absolute need of trustworthy khasras before a revised demand could with confidence be imposed and distributed and before the new rent-rolls could be compiled. The comparative statement of soil areas on page 64 will show how great has been the difference between the soil areas recorded at the recent settlement and those entered in 1871-72, and the difference is even greater than a cursory examination of the statement in question might lead one to suppose. The soil classifications adopted by Mr. Thornton and Sir Henry Elliott in 1841 and 1835 respectively have already been described, and it has been shown how Mr. Martin, after strictly adhering to Mr. Thornton's system for purposes of assessment, abandoned it as impracticable when he came to adjust the rent-rolls of the tract. The final experience of Mr. Martin's settlement, therefore, was against Mr. Thornton's system and in favour of one of greater simplicity. Indeed, Mr. Martin's verdict has practically been given in favour of a method little more detailed than that followed in the Meerut district, and in the great majority of villages rent-rates were fixed for wet and dry good land and dry bhúr or sand, and occasionally only for irrigated bhúr, which was generally classed with ordinary wet land.

New khasras. Change in classification of soils.

3. And the change from the system of Mr. Thornton was rendered necessary by the method of agriculture followed by the Játs of the upper Doáb, and by all who have adopted their system of farming. As long as irrigation was only from wells, irrigation and careful cultivation, although less entirely than elsewhere, were in this tract concentrated round the village; but where there was no irrigation at all, sugarcane was frequently grown all over large estates in the fields best suited to it, as is the custom in dry villages even now. When canal irrigation was introduced, convenience of water-supply became a consideration of as much importance as nearness to the village; and as a cultivator could never be certain whether he would have to irrigate that portion of his land sown with ordinary crops, it seems to have been generally allowed that the best policy was to distribute the manure of the village over the whole of the irrigable area, or at least over as large a portion of the irrigable loam as possible.

Changes justified by system of cultivation.

Where the proportion of sugarcane to the cultivated area is very great, each field comes under cane and the most careful cultivation once in every three years, unless indeed certain fields should be reserved for an equally important crop, such as múnji or the finer rice, and is manured for that crop, alternating with gram. And even when the proportion of the cane crop to the irrigable area is less, the same system

is followed and sugarcane is planted in extensive clumps, each year in a different direction, so that field after field in its turn, but at a longer interval than in the best villages, comes under the most careful cultivation. Under such circumstances it is almost impossible to secure the accurate entry of manured land. Nearly one-third of the sugarcane recorded in 1841 was grown on land entered unmanured, and it is likely that at Mr. Martin's settlement the errors in the entry of this soil were not less numerous, for whereas in 1841 the area of recorded misan was three and a half times as great as that under sugarcane, at the recent settlement an area less than two and a half times that ordinarily occupied by sugarcane was entered as manured. The 45,339 acres of Mr. Martin's records have now been increased to 65,509; but even this latter area is distinctly too small, and in some parganas is very obviously so.

By Mr. Martin's own experience.

4. So entirely was the difficulty of procuring accurate misan entries in the upper Doab acknowledged, that, when after assessment Mr. Martin and his subordinates came to fix the rent-rolls, and found sugarcane growing in so-called unmanured land, while the misan of his records was in the ordinary rotation covered with wheat, cotton, urd, rice, &c., misan entries were almost invariably disregarded, and rates were fixed for wet and dry good land and for sand. In the western parganas an attempt was made to overcome this difficulty by recording land ordinarily manured, but not manured in the year of measurement as "muhitah." The attempt, however, was no more successful than it had been 20 years before; and although in exceptional cases the help of rates on manured land has been missed, I think that on the whole the determination which I came to of not assuming rates for manured land was sufficiently justified.

Advantages of the change.

5. It is likely enough that when the ordinarily irrigated area becomes more and more distinct, the fields to which manure is ordinarily given will be capable of effective demarcation; but at present the cane crop wanders over the whole irrigable area of most villages, or at least over the whole of the good land and much of that which is sandy, and the fields which one year bear the poorest crops and show little sign of having been ever manured are likely before long to come under a crop of sugarcane and temporarily to equal in productiveness any fields in the village.

There is of course a great difference between the average quality of land in a thickly inhabited village with an enormous percentage of cane and that of the township with a petty hamlet and a small proportion of the best crops; but in such cases it is likely that there is as much difference between the misan of the two villages as between the average of each soil, rausli, 2nd rausli, and bhur, and it would be necessary in any case to allow for that difference by placing the estates in different circles. The omission of misan removes an additional source of uncertainty and error, and confines the entries to those soils which are well known to the people and on which rents are ordinarily fixed. The extent of manured land was not, however, altogether neglected; it was recorded, and was with the still more trustworthy crop statement considered in each case.

Soil classification adopted.

6. But the soils which were uniformly recorded, and which formed the basis of assessment, are:—

- Wet and dry barah or garden land.
- Wet and dry 1st rausli or loam.
- Wet and dry 2nd rausli or sandy loam.
- Dry bhur or sand.

Description of soils.
Barah.

The barah of this district is the land round towns, cultivated almost invariably by malis, in which tobacco and vegetables are grown. The area is so small that the fixation of special rates for this land is mainly useful in the assessment and compilation of rent-rolls of exceptional estates in which the extent of this land is considerable, although in the whole tract it is unimportant.

Under 1st rausli or loam is included the extensive area devoted to the ordinary crops and with no very perceptible admixture of sand. It might in some ways have been better to retain in the soil classification the dákár or clay formerly recorded, but true clay is very limited in area, and can be easily allowed for whether in assessment or when rents are fixed; and as in former days a rice crop was the peculiar feature of clay soil in this district, there was a great likelihood of every rice field, even if sandy loam, being entered dákár. It was this very general mistake which in 1863 led to dákár being classed with the other better soils when rent-rolls came to be compiled. The crops which are ordinarily grown upon good rausli are sugarcane, rice, cotton, maize, jowar, chari (or jowár sown thick for fodder), úrd, and the other better pulses in the rains; and in the cold season wheat, wheat and gram mixed, wheat and barley mixed, gram, saffron, and peas. In this land bájra, moth, and barley should be rarely or never seen, except indeed in the case of barley when it is required for horses, or as an early food crop by a man who has no bad land in which to sow it.

1st rausli or loam.

2nd rausli or sandy loam was known in the old Meerut settlements as seontah, and under the name now given to it was occasionally recorded in the papers of 1841, and more generally in those of the recent settlement. At Mr. Thornton's settlement a 1st class bhúr was sometimes entered, and this name would have been equally if not more accurate. But wet 2nd rausli has in many cases come under very careful cultivation, and in such land are grown the very best crops, and a plentifully manured field of this land produces excellent cane; indeed, before irrigation became general, slightly sandy loam was selected on a variety of grounds for this crop. But the effect of manure is much less permanent than in naturally better soil; more is wanted to fertilize it, and even if the west winds did not blow the upper layer of sand with its intermixed manure away, more frequent manuring would be necessary, and the inferiority of the soil is shown when the magnificent cane crop is followed by a poor yield of wheat or wheat and barley mixed.

2nd rausli or sandy loam.

2nd rausli, standing half way between unmixed loam and sand, has no specially characteristic crops, and on it are grown the very best and the worst; indeed, rice is the only crop not generally grown in this soil, but even the finer rice is now sometimes grown in distinctly sandy fields. To attempt to get patwáris and amíns to enter land on which cane, cotton, and wheat are freely grown as bhúr, even of the 1st class, is almost hopeless, and the denomination 2nd rausli was adopted rather in order to allow patwáris and amíns to combine their usual show of zeal for the interests of the State with accurate soil entries, than because the denomination of 2nd class rausli was in itself preferable to that of 1st class bhúr. For as a rule the tendency of subordinates is to exaggerate the goodness of the soils rather than to make entries opposed to the interests of Government, and the work of testing officers has generally tended to alter the entries in favour of the people.

Bhúr or sand was in some villages divided into classes by Mr. Thornton: bhúr or level sand and dándá or high uneven sand. But the distinction is not generally made by the people, and needless multiplication of soils is to be avoided. The crops distinctive of bhúr are moth and bájra in the rains and barley in the cold weather, and these three crops cover an area almost equal to the extent of bhúr in the six parganas under report.

Bhúr or sand.

Irrigated bhúr has not been recorded in the new khasras, not because bhúr is not irrigated, but because it is not ordinarily irrigated until it is so improved by careful cultivation that it may fairly be classed as 2nd rausli. After the useful experience obtained in the compilation of rent-rolls, I am somewhat doubtful whether it might not have been better to retain in the soil classification irrigated bhúr, under which denomination would have been entered sand which has been in no way improved by cultivation. Throughout settlement operations, however, every effort has been made to avoid the mistake made at the recent settlement of entering too generally the

Irrigated bhúr.

poorer soils as irrigated. With reference to this point it is most inexpedient to trust too much to future progress, and where the canal distributaries have been in working order for many years, the fact that land has not been irrigated is generally to be accounted for by perfectly valid reasons. Where water can be obtained by lift alone, this of itself is a sufficient reason why water should not be generally taken for such fields in a sparsely populated tract, in which a sufficient area is irrigated flush. Where, moreover, the population is insufficient, it may be that only a portion of the really good land capable of flush irrigation is ordinarily watered, and the extension of regular irrigation in such tracts must necessarily be slow, as it depends upon the gradual increase of population and on the number of cattle. And the statistics of the Irrigation Department show clearly enough that regular, year by year, irrigation extends very gradually. Each year of drought gives an extraordinary impulse to irrigation, but the area irrigated soon returns to something like the old standard, and the really permanent irrigation of the kharif progresses, as might be looked for, slowly.

Irrigation entries.
Exclusion of exceptional
irrigation.

7. In the compilation of the new khasras every effort was made to exclude from the area recorded irrigated the land which is watered only in seasons of extraordinary emergency. About once in every decade there is a year of drought so severe that it pays the cultivator to irrigate the very worst land, for not only is the price of grain doubled, but the value of the straw rises in a much more marked ratio, while the serious item in the cost of cultivation—the water-rate—remains unchanged. Although, therefore, the irrigation of such land does not secure a good crop, the cultivators may find that a payment of Rs. 2-4-0 per acre for the preservation of a poor crop of barley for example is remunerative, owing to the increased value of the produce. Such land may not again come under irrigation for many years; indeed, if such land bore a crop of barley in 1861-62, and of bájra in 1868-69, it is quite possible that it may have been irrigated once only in the 20 years during which the Ganges canal has been at work. Now it is very difficult to charge such land an additional rate on account of an advantage which is no doubt distinct enough, but which can be utilized only at long intervals, and to class such land with the ordinarily irrigated fields would be impossible. I have therefore endeavoured to exclude all such land from the area recorded irrigable, and when any additional charge can be made for the possibility of irrigation in a season of drought, it is both easier and fairer to allow for this advantage when fixing a rent-rate for land which is practically dry. It is owing to the exclusion of such exceptional irrigation from the area entered irrigated, and to the circumstance that in the new khasras the records of irrigation in past years, rather than a vague expectation of rapid progress in the future, have guided the entry of irrigated land; that more especially in the sandier parganas, the new soil statements show a falling-off instead of a rapid increase in the irrigated area, notwithstanding the continual progress which canal irrigation has made during the last ten years.

Comparative statement
of areas.

8. The following statement shows the areas of the different parganas according to the records of the three settlements of 1841, 1863, and 1872-73. More complete details, and the particulars of cultivated land, also given in a subsequent abstract, will be found in the unabridged comparative soil statement which forms appendix IV :—

Parganas.	Settlements.	Total area.	Barren.	Revenue-free.	Total not assessable.	Groves.	Old waste.	Recent fallow.	Total culturable.	Cultivated.
		Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
PÚR CHAPÁR.	Old ...	55,026	6,796	2,604	9,400	146	2,826	5,533	8,504	37,122
	Recent ...	57,289	8,668	2,573	11,241	201	3,717	1,672	5,590	40,458
	New ...	56,747	8,422	2,595	11,017	272	2,873	686	3,581	42,194
	Difference between new and old.	+1,721	+1,626	-9	+1,617	+126	-153	-4,897	-4,923	+5,027
MUZAFFARNAGAR.	Old ...	68,144	8,150	12,037	20,187	261	3,625	4,218	8,099	39,858
	Recent ...	69,538	7,844	11,449	19,292	604	2,730	4,994	8,328	41,917
	New ...	69,554	7,292	10,275	17,567	563	2,998	1,989	5,550	46,436
	Difference between new and old.	+1,410	-858	-1,762	-2,620	+302	-627	-2,224	-2,549	+6,578
BHÚKARHERI.	Old ...	62,811	11,313	2,090	13,403	110	5,898	8,570	14,578	34,830
	Recent ...	64,491	11,494	2,088	13,582	220	4,058	2,438	6,716	44,193
	New ...	64,577	10,257	2,084	12,341	239	4,712	1,014	5,965	46,271
	Difference between new and old.	+1,766	-1,056	-6	-1,062	+129	-1,186	-7,556	-8,613	+11,441
JÁNSATH.	Old ...	61,922	5,944	1,157	7,101	377	4,474	6,233	11,084	43,740
	Recent ...	61,971	6,239	1,132	7,371	335	2,843	2,659	5,837	48,763
	New ...	61,968	5,934	1,135	7,069	429	3,363	793	4,575	50,319
	Difference between new and old.	+41	-10	-23	-32	+52	-1,121	-5,440	-6,509	+6,579
KHÁTAULI.	Old ...	62,228	8,013	7,699	15,712	438	3,406	4,356	8,200	38,316
	Recent ...	62,273	6,548	8,899	15,447	756	4,088	1,623	6,467	40,364
	New ...	62,293	6,408	8,876	15,284	687	3,499	600	4,786	42,223
	Difference between new and old.	+65	-1,605	+1,177	-428	+249	+93	-3,756	-3,414	+3,907
BHÚMAH SAMBALHERAH.	Old ...	48,715	8,700	83	8,783	159	8,724	3,492	12,375	27,557
	Recent ...	48,868	9,210	80	9,290	204	2,198	2,900	5,302	34,271
	New ...	48,923	9,888	52	9,440	191	1,755	938	2,884	36,599
	Difference between new and old.	+208	+688	-31	+657	+32	-6,969	-3,554	-9,491	+9,042
TOTAL.	Old ...	356,846	48,913	25,670	74,583	1,491	28,952	32,397	62,840	221,423
	Recent ...	364,430	50,003	26,221	76,224	2,320	19,634	16,286	38,240	249,966
	New ...	364,057	47,701	25,018	72,719	2,381	18,990	5,970	27,341	263,997
	Difference between new and old.	+5,211	-1,212	-652	-1,864	+829	-9,962	-26,427	-35,499	+42,574

9. The difference in the total area is not very important, being an increase at the present settlement over the area recorded in 1841 of 5,211 acres, or 1·45 per cent. To a certain extent this increase may be plausibly accounted for by the correction of a few serious mistakes in the measurement, or at least the statement of the areas of certain villages, and more generally, especially in parganas Púr Chapár and Bhúkarheri, to the more accurate survey of the broken land along the edge of the upland. The three southern parganas, it will be noticed, show only the slightest discrepancies, and for the whole tract the difference is not important.

Discrepancies in the total area.

10. Notwithstanding the appropriation of some 5,000 acres for canals, roads, and the railway, the total area recorded barren has decreased by 1,212 acres, or 2·48 per cent., throughout the tract, and this notwithstanding the increase of marsh in the river valleys. Notwithstanding the large additions to the barren area which the construction of the Ganges canal has in one way or other necessitated, the area of so-called barren land has been distinctly reduced in Bhúkarheri, Muzaffarnagar, and Khátauli; in Jánsath, notwithstanding the large area taken up for the canal, the barren area has not increased, and only in Púr Chapár and in Bhúmah Sambalherah is the area of barren waste seriously greater than it was more than 30 years ago. In the former pargana, the lands taken up for the canal and the increase of marsh are quite sufficient to account for the difference, even if the total area of the pargana had not increased to an extent greater than the barren waste; but in both parganas, the sandiest in the district, there is an unusually large percentage of poor land, and

Barren waste.

the population is still insufficient for the effective cultivation of the land entered culturable, so that there was less necessity to invade the so-called barren waste. In some parganas, more especially in Muzaffarnagar and Khátauli, much of the increased cultivation, and of that substituted for the ploughed land taken up for public purposes, has been obtained from the barren waste of earlier settlements, and shallow depressions and wide village roads have furnished much land to the plough.

Revenue-free land.

11. In this district as elsewhere revenue-free land has decreased in area, and there are still some life tenures to fall in. The increase recorded in pargana Khátauli is owing to more accurate measurement, and not to the reversal after settlement of the decisions of Mr. Moberly, Special Deputy Collector for the settlement of claims to revenue-free land, as these have been taken into consideration in the statistics of the old settlement. Mr. Moberly appears to have respected all well-supported titles, even when the sanads had been lost, to revenue-free grants by ruling emperors, but to have systematically resumed all grants made under the authority of emperors who were no longer independent. The distinction seems to be a sound one; but Mr. Moberly's orders were set aside, and among the grants which were restored was that of five villages in Khátauli, the revenue of which was assigned in perpetuity to the ancestor of the present Nawáb of Karnál, although the grant of four of them dated no further back than the seventeenth year of the reign of Sháh Álam. In this way the recent acquisitions of adventurers during the last half century of anarchy were allowed to swell the list of grants otherwise due in about equal proportions to imperial piety, in the endowment of Shekh communities, and to the court influence or gallant service of Sayyid houses during the reigns of Jahángír, Sháhjahán, and Álamgír.

Assessable area.

12. The area recorded assessable has increased in every pargana except Bhúmáh Sambalherah, where the falling-off has already been accounted for by the increase of barren waste; in Púr Chapár, Jánsath, and Khátauli, more especially in the two former parganas, the increase is unimportant; and Muzaffarnagar and Bhúkarheri contribute nearly the whole of the addition of 7,075 acres to the assessable area of the tract.

In Muzaffarnagar, the increase amounting to 4,029 acres is due in a great measure to the lapse of revenue-free grants, but partly also to the correction of serious errors, and here more than elsewhere to inroads upon the barren waste. In Bhúkarheri there has been no resumption of revenue-free lands, but more accurate measurements have shown the area of this pargana to be greater than was supposed; and towards the broken land which overhangs the Ganges valley cultivation has been making steady inroads upon land which was formerly recorded barren. But the mere addition of less than 3 per cent. to the assessable area would have had little or no effect on the assessment of the tract, had it not been accompanied, and in some degree caused, by a change in circumstances which becomes more apparent, and will be more properly explained, when the details of the assessable and cultivated areas are considered.

Groves.

13. One of the most satisfactory changes which has marked the period which has elapsed since Mr. Thornton's settlement has been the important increase to the area under plantations throughout the tract which is the subject of this report. In none of the six parganas is there any extent of jungle left, and everywhere but in the south-west corner groves were few 30 years ago: and it is believed that the grove areas of the old settlement, which have been extracted with some trouble from the old khasras, considerably overstate the area at that time under plantations, for in those days bághs were not carefully entered, and it is likely that much land has been included which, with here and there a tree upon it, can hardly be compared with the distinct grove area now recorded. Notwithstanding this, however, the area under groves has substantially increased, and the more detailed statement of grove areas given shows that the increase is still greater in the area still cultivated, in which groves have been planted: and in this respect too it is likely that the figures of the old settlement overstate the area of land under regular plantations. But although the

extension of the grove area has been very great since 1841, especially in the previously dry and ill-watered neighbourhoods, it has not in three parganas continued since the recent settlement. In Muzaffarnagar and Khátauli there has been, in the latter pargana especially, a distinct decrease, owing partly to the demand for wood during and after the construction of the railway, and partly to the unfortunate neglect to secure to the cultivators their ancient rights of planting trees. In Bhúmáh Sambalherah the decrease is one for which I cannot account, and is most probably owing to a difference in the definition of groves at the two settlements; in the papers of the present settlement isolated mango trees in fields of wheat were excluded from the grove area.

Comparative statement of area covered by groves.

Number.	Pargana.	Settlement by Mr. Thornton.		Settlement by Mr. Martin.		Present revision.	
		Cultivated.	Not cultivated.	Cultivated.	Not cultivated.	Cultivated.	Not cultivated.
		Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1	Púr Chapár ...	49	146	165	201	155	272
2	Muzaffarnagar ...	228	261	216	604	201	563
3	Bhúkarheri ...	34	110	175	220	200	239
4	Janli Jánsath ...	94	377	227	335	191	429
5	Khátauli ...	188	438	259	756	188	687
6	Bhúmáh Sambalherah ...	36	159	186	204	154	191
	Total ...	639	1,491	1,228	2,320	1,089	2,361

In addition to the total area of 3,470 acres, whether cultivated or uncultivated, now under plantations in land liable to assessment, there are not only 362 acres under bāghs in revenue-free land, but 1,146 acres of plantation along the main canal, and of less luxuriant wood on the Anúpsahr branch, besides road avenues and trees along the distributaries. Throughout the tract, therefore, the area under trees has fully doubled since 1841, and nothing is wanted now to make this tract thoroughly well wooded except permission to occupancy tenants to plant trees in their occupancy holdings.

14. Irrespective of the area covered with plantations, the culturable waste or land fit for cultivation which had never come under the plough, or had not been cultivated during the five years preceding the year of measurement, shows a decrease since 1841 of close upon 10,000 acres, or 35 per cent. In Khátauli there has been no reduction; in Púr Chapár it has been trifling; in Muzaffarnagar, Bhúkarheri, and Jánsath considerable; and in Bhúmáh Sambalherah enormous, for in this pargana no less than 79 per cent. of the culturable waste of 1841 has now come under a different classification. A small portion of this area may have gone to swell the barren waste but by far the greater portion must have come under the plough. And the advance throughout the tract in this respect is the more remarkable that in every pargana percolation from the canal has ruined much land in the river valleys which 30 years ago was the most productive. Had it not been for the constant encroachments of marsh upon the cultivated area, it is impossible that a pargana like Khátauli should have remained in this respect in *statu quo*, and it is likely that but for this cause the culturable waste would throughout the tract have been as largely reduced in extent as that of the recent fallow. But even in 1841 there was, except in Bhúmáh Sambalherah, no great extent of culturable waste left, and only in that pargana and in Bhúkarheri did it exceed 10 per cent. for the assessable area.

Old waste.

Recent fallow.

15. And the extent of recent fallow (in this district land lying uncultivated for three years) was not much greater, notwithstanding the fact that the settlement of 1841 followed so closely after a drought of great severity, which must have been felt all the more that irrigation was so partial and insufficient. The area of recent fallow has now been reduced from 32,397 acres to 5,970, and in no pargana does the proportion to the whole area exceed 4 per cent., and in four it does not exceed 2 per cent. In the instructions for the compilation of the khasra it was ordered that land ordinarily cultivated, but left unsown on account of drought, was to be included in the cultivated area; but the total area of land recorded as cultivated, but not sown, in the year of measurement amounts to only 730 acres, so that the total area of recent fallow amounts to less than 2 per cent. of the assessable area. The extent of this land of course depends to a certain extent upon the season, but so large an area is now protected by the canal, and the light sandy soil which constitutes the bulk of the land not so protected is so easily worked, and is so comparatively productive in seasons of insufficient rain, that it is not likely that the recorded area of recent fallow will be seriously exceeded for any lengthened period.

Little extension of cultivation possible.

16. In this tract, then, of the total assessable area, less than 10 per cent. remains uncultivated, and of this area one-tenth is under regular plantations. So far, therefore, as the area under the plough is concerned, little improvement is to be looked for in this tract, unless a systematic attempt to drain the river valleys shall be made, and until the value of land shall rise considerably it is not likely that drainage operations on a large scale will prove remunerative. In future as in past years it is likely that the so-called barren waste will supply fresh land for the plough, but there is now less practicable land left. Marsh in the river valleys is steadily increasing, and it may be hoped that an increased area will be planted with trees, so that any further important increase to the area under cultivation is not to be looked for, and it is unlikely—indeed impossible—that any future settlement officer will have to record progress in this respect in any way equal to that of the last 30 years.

Area under cultivation.

17. At the dates of the old settlements the cultivated assessable area of the upland portion of the Ganges-Kāli Doāb amounted to 221,423 acres. In 1863 the cultivated area stood at 249,966 acres, while it now amounts to 263,997 acres, being an increase over the area of the old settlement, amounting to 42,574 acres, or 19 per cent. But more than half of this increase has been obtained from the recent fallow, a certain portion of which may be attributed to the accidents of season; but even leaving out of consideration the recent fallow brought under cultivation since Mr. Thornton's settlement, there remains a substantial and real increase of the area under cultivation, amounting to 16,147 acres, or nearly 7 per cent. There is a decided increase in every pargana, but it is greatest in those like Bhūkarheri and Bhūmah Sambalherah, in which the extent of recent fallow was at last settlement the greatest.

Extension of irrigation.

18. The details of soils for the old settlement could not be obtained without great trouble and expense, and owing to the destruction of records the statistics would not have been complete; but the subjoined statement shows the improvement in respect of irrigation which has taken place since 1841, and the moderation of the soil entries of the present settlement compared with those of 1863:—

Detail of cultivated area.

Pargana.	Settlement.	IRRIGATED.										TOTAL.			DRY.				Total cultivation.	
		Barah.			1st result.			2nd result.			Total irrigation.	Barah.	1st result.	2nd result.	Ebdr.	Total.				
		Canal.	Well.	Other sources.	Canal.	Well.	Other sources.	Canal.	Well.	Other sources.										
PŪR CHAPĀN	Old	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	37,069	37,122
	Recent	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14,606	40,458
	New	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	22,134	42,149
	Difference between old and new.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	-14,945	+5,027
MUZAFFARABAD	Old	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	36,725	36,858
	Recent	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	20,253	41,917
	New	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	25,774	46,436
	Difference between old and new.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	-10,951	+6,578
BHOJANPURI	Old	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	34,468	34,830
	Recent	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	18,844	44,193
	New	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	22,364	46,271
	Difference between old and new.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	-12,314	+11,441
JĀNSĀTH	Old	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	37,467	43,740
	Recent	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	30,199	48,763
	New	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	26,074	50,319
	Difference between old and new.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	-11,393	+6,579
KĪTĀULI	Old	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	27,504	38,316
	Recent	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	20,473	40,364
	New	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	17,939	42,323
	Difference between old and new.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	-9,565	+3,907
BHOJAN SAMBAL- NĪHAN.	Old	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	26,357	27,557
	Recent	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	26,146	34,271
	New	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	27,100	36,599
	Difference between old and new.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	+743	+9,043
TOTAL	Old	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	199,790	231,433
	Recent	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	180,526	249,966
	New	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	141,365	263,997
	Difference between old and new.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	-85,435	+43,574

Comparison of recent
and new soil entries.

19. The difference between the soil entries of the recent settlement of Mr. Martin and that now concluded are more clearly shown in the following summary :—

Pargana and period.					Bárah.	1st rausli.	2nd rausli.	Bhár.
Púr Chapár ...	1863	...	...	...	...	31,521	5,418	3,519
	Now	...	...	...	20	14,460	13,572	14,097
	Difference	...	...	...	+20	-17,061	+8,154	+10,578
Muzaffarnagar,	1863	...	...	...	...	32,704	3,384	5,819
	Now	...	...	...	91	24,026	10,553	11,766
	Difference	...	...	...	+91	-8,678	+7,169	+5,987
Bhúkarheri ...	1863	...	...	...	...	37,074	716	6,408
	Now	...	...	...	50	20,071	13,767	12,383
	Difference	...	...	...	+50	-17,003	+13,051	+5,980
Jánsath ...	1863	...	...	...	...	34,606	414	13,744
	Now	...	...	...	371	28,833	7,448	13,717
	Difference	...	...	...	+371	-5,773	+7,034	-27
Khátauli ...	1863	...	...	...	...	34,131	196	6,037
	Now	...	...	...	62	28,554	7,251	6,356
	Difference	...	...	...	+62	-5,577	+7,055	+319
Bhúmárah Sam- balherah,	1863	...	...	...	...	20,718	573	12,980
	Now	...	...	...	112	10,559	8,072	17,556
	Difference	...	...	...	+112	-9,859	+7,499	+4,576
Total, 1863					...	190,753	10,701	43,512
Now					656	126,803	60,663	75,875
Difference					+656	-63,950	+49,962	+32,363

The bárah or garden land was not specially entered in the papers of the recent settlement, so that for purposes of comparison it must be included in the better loam. The total of the bárah and 1st rausli now recorded is, notwithstanding the increase of the cultivated area by 42,574 acres, less by 63,294 acres than the mísan, 1st rausli, and dákar of Mr. Martin's settlement, and amounts to only 48 per cent. instead of 74 per cent. of the cultivated area. The recorded 2nd rausli again now amounts to 49,962 acres more than in 1863, and this soil amounts to 23 instead of 4 per cent. of the area under cultivation. The recorded area of bhúr in the same way has risen from 48,512 acres to 75,875 acres, from 19 per cent. to 29 per cent. of the cultivated area.

The increase in the recorded area of the poorer soils is important in all parganas, and is enormous in those farthest north—Púr Chapár, Bhúkarheri, and Muzaffarnagar. In the first named pargana the soil entries were distrusted by Mr. Martin, who, after giving the soil areas of the pargana, wrote: "The above classification is from the amíns' papers, and, like most of their measurements, errs in the description of soil. I am sure the bhúr land in this pargana is at least 14 or 15 per cent." The area now recorded exceeds 33 per cent., and that of 2nd rausli 32 per cent. In other parganas distrust of the soil entries seems to have been felt and is expressed in the remarks on individual villages, and it is much to be regretted that such acknowledged errors were not rectified in time. Such grave errors in soil classification necessarily affect the calculation of rates and destroy a settlement officer's confidence in their application. And with so thoroughly unsound a groundwork, it is hardly to be wondered at that at the recent settlement the assessing officers should have been afraid to make either serious additions to or reductions of the old demand.

Irrigation entries.

20. This fatal inaccuracy extended to the entries of irrigation, and, notwithstanding the steady increase of irrigation from the canal, the area of recorded irrigation has

fallen off in all the northern parganas, while in the whole tract the increase is a very slight one. In 1841 there were watered in the three northern parganas 3,348 acres, and by far the greater part of this area was contributed by Muzaffarnagar. In 1863, the irrigated area had risen after some eight years of irrigation from the canal to 72,865, while now only 64,604 acres have been recorded irrigated. This falling-off to the extent of 8,261 acres is not real, although on sanitary grounds the canal irrigation of about 1,000 acres has been prohibited in Muzaffarnagar, but is owing to the previous overstatement of irrigation, especially in Púr Chapár—an overstatement which must have been all the more serious at the time, as irrigation has of late years unquestionably extended. And as the great change which has taken place in this tract since 1841 is due, not to the increase of the cultivated area, for which indeed there was little room, but to the opening of the Ganges canal, and to the consequent increase of irrigation and improvement of cultivation, it is necessary to scrutinize the records of irrigation with the greatest care.

21. In 1841 only the south-western portion of the Ganges and Káli Doáb in this district was at all generally irrigated, and a line drawn from the town of Jánsath to that of Muzaffarnagar bounded on the north the tract which was at all effectively secured by wells. In Khátauli and the south of Jánsath and in the south-west corner of Bhúmáh masonry wells were fairly numerous and earthen wells were practicable, and in the south of Muzaffarnagar the Sayyids had in the days of their prosperity constructed many masonry wells, which afforded means of irrigation for a considerable proportion of the land in the townships in which they were situated. But to the north and east the sub-soil was sandy and water was from 60 to 110 feet distant from the surface, so that earthen wells were impracticable, while masonry wells were expensive in construction and difficult to work, and in this part of the district irrigation was practically unknown.

Irrigation in 1841.

Mr. Thornton looked forward to the immense change which the construction of the Ganges canal "would produce in the condition of a sandy and totally unirrigated tract, such as is the great part of the district which will be influenced by the canal." Of the eastern portion of the tract he wrote: "of the space between the sand ridges and the Ganges khádir it may be generally said that it is a poor country. Kacha wells cannot be made in it, and frequently not even masonry ones. Of the latter the cost often exceeds Rs. 2,000 for a well of which the circumference will admit of two pairs of bullocks working at once, and owing to the great depth of the water it is raised for irrigation at a great cost. The scarcity of wells leads to there being very few villages, the cultivators being obliged to locate themselves at such a distance from the fields as necessarily has an injurious effect upon the state of agriculture."

22. This last disadvantage is still felt, especially along the edge of the upland overlooking the Ganges valley, but a glance at the map will show how fully the irrigation of nearly the whole tract has now been provided for. With the exception of the not very extensive tract towards the southern boundary lying on either side of the East Káli river, rajbahás running as a rule at high levels provide for the irrigation in almost every village of as much land as the people can profitably water. And in the northern parganas, which were formerly the driest, irrigation is now most general and easy. In Púr Chapár and Bhúkarheri every village is now irrigable except five, and the only villages in the two parganas irrigable, but not watered from the canal, are two uninhabited isolated townships in the sand waste and two sparsely populated estates near the ravines, which hitherto have been watered only in seasons of great emergency. The fifth estate is so uneven that it is never likely to come under irrigation. In Muzaffarnagar there are to the east of the West Káli only two small villages which do not receive irrigation from the canal. In Khátauli there are five estates along the West Káli and 14 near the East Káli still unwatered by the canal, and in the south of Jánsath there are ten more. Until recently the western villages of Bhúmáh Sambalherah constituted the only portion of the district of any size in which

Subsequent extension of irrigation.

irrigation was still practically unknown, but now a good distributary traverses this portion of the pargana, and a wholly dry estate will in future be unknown. Throughout the whole tract in which 30 years ago wholly dry villages were the rule, there are now hardly any left: and these are uninhabited estates of poor soil and small area. In the only important clusters of villages into which canal irrigation has not penetrated wells are fairly numerous, and the river valleys afford a considerable extent of land, in which crops can be grown without irrigation in years of drought.

Increase in the irrigated area and statistics of irrigation.

23. The increase in the area under irrigation is very great in every pargana, and as it is the chief ground for a decided enhancement of the land revenue, notwithstanding the reduction in the share of the assets taken by the State, it is well that the irrigation entries should be justified by a reference to the statistics of canal irrigation in recent years. The following statement shows placed side by side the areas recorded as irrigable from the canal and those actually irrigated in recent years:—

Pargana.		Area recorded as canal irrigated.	1863-64.	1864-65.	1865-66.	1866-67.	1867-68.	1868-69.	1869-70.	1870-71.	Total.	Average.
		Acres.										
PUR CHAPAR...	Assessed ...	19,925	13,238	17,199	11,114	16,780	14,242	24,859	14,009	14,522	125,957	15,746
	Revenue-free.	983										
MUZAFFARNAGAR.	Assessed ...	18,946	11,767	14,686	13,587	16,887	14,967	23,769	16,304	15,122	126,969	15,874
	Revenue-free.	8,630										
BRUKARHRI...	Assessed ...	25,850	11,211	17,730	10,741	17,054	18,799	25,170	14,525	15,568	125,798	14,735
	Revenue-free.	1,368										
JANBATE ...	Assessed ...	21,520	4,594	10,028	10,014	13,726	6,251	23,346	12,124	11,051	91,134	11,293
	Revenue-free.	591										
KHATAULI ...	Assessed ...	20,422	5,104	19,735	12,471	12,171	11,338	23,627	15,767	15,426	115,649	14,466
	Revenue-free.	5,366										
BRUMAR SAM-BALHERAH.	Assessed ...	9,001	2,994	4,336	4,258	5,069	3,024	7,428	3,496	4,097	24,711	4,339
	Revenue-free.	15										
TOTAL ...		113,694	48,958	83,713	62,185	81,637	63,621	128,208	76,135	75,796	620,238	77,539
	Revenue-free.	11,953										
GRAND TOTAL ...		125,647	...	...	...	...	...	...	...	...	...	...

Irrigation affected by seasons.

24. Of the five years which immediately preceded the completion of the new khasras, 1868-69 was a year of drought and exceptional irrigation, and even the irrigation of 1869-70 was influenced by the drought; 1866-67 was a year of full average irrigation, while in 1867-68 canal irrigation of the cold-weather crops was reduced to a minimum. Whether, owing to the fact that settlement operations were in progress at the time or not, the irrigation of 1863-64 was so exceptional that there has never since been any approach to its figures. Except in years of drought the area irrigated in the kharif is fairly constant and does not in this tract fall generally much below 30,000 acres, whereas in 1863-64 it stood at 18,349, and was least general precisely in those parganas in which there was at the recent settlement the most reason to suspect fraud. In 1867-68 the irrigation of cold-weather crops fell to 28,373 acres in a season of constant showers, but such restricted irrigation is altogether exceptional, and the average of the eight years is 47,410 acres, and excluding 1863-64 and 1868-69, it is 42,836 acres.

Assumption of a fair standard of irrigation.

25. In this way 72,000 acres is a safe numerical average, and it may be assumed that whenever water is required over 80,000 acres may be irrigated, as was the case in 1864-65 and 1866-67. The actual irrigation from the canal has only once equalled the recorded area of irrigation, but it is considered that the average irrigation is more than sufficient to justify the areas recorded as ordinarily irrigable. For, especially in the case of the poorer and less highly cultivated land it is found that the same fields are not irrigated every year, and even the very best land is not ordinarily irrigated when there is grown on it maize, jowar, urd, the fodder crops, or the coarser rice. Sandy loam indeed is irrigated in average seasons only when it bears cane, while the irrigation of all land in the cold weather depends in a great measure upon the time at which the rain falls, as well as upon the quantity. And it has been found that irrigation entries are absolutely safe when the area recorded irrigable exceeds the irrigation of an ordinary year by one-half in the case of good land, and by about 100 per cent. in the case of bad. In other words, good irrigable land is unirrigated

once in every three years, and bad land every alternate year. On this assumption the average canal irrigation in each pargana required would be as follows :—

	Canal irrigated 1st ransli and reduction of one-third.	Canal irrigated 2nd ransli and reduction of one-half.	Total area re- corded irrigable from canal.	Ordinary irrigation required for irri- gable area.	Average canal irrigation of eight years.	Average canal irrigation of six years, excluding 1863-64 and 1868-69.	Irrigation of fair average year, 1869-70.
Pâr Chapâr ... {	13,357	7,551	20,908				
	— $\frac{1}{3}$ = 4,452	— $\frac{1}{3}$ = 2,775					
	8,905	3,776	...	12,681	15,743	14,636	14,009
Muzaffarnagar, {	19,112	3,484	22,596				
	— $\frac{1}{3}$ = 6,371	— $\frac{1}{3}$ = 1,742					
	12,741	1,742	...	14,483	15,874	15,242	16,304
Bhûkarheri ... {	18,805	6,423	25,228				
	— $\frac{1}{3}$ = 6,268	— $\frac{1}{3}$ = 3,212					
	12,537	3,211	...	15,748	15,725	14,903	14,525
Jânsath ... {	19,917	2,194	22,111				
	— $\frac{1}{3}$ = 6,639	— $\frac{1}{3}$ = 1,097					
	13,278	1,097	...	14,375	11,392	10,532	12,124
Khâtauli ... {	24,132	1,656	25,788				
	— $\frac{1}{3}$ = 8,044	— $\frac{1}{3}$ = 828					
	16,088	828	...	16,916	14,456	14,486	15,767
Bhûmah Sambal-herah ... {	6,335	2,681	9,016				
	— $\frac{1}{3}$ = 2,112	— $\frac{1}{3}$ = 1,340					
	4,223	1,341	...	5,564	4,339	4,046	3,496
Total ... {	101,658	23,989	125,647				
	— $\frac{1}{3}$ = 33,886	— $\frac{1}{3}$ = 11,994					
	67,772	11,995	...	79,767	77,530	73,846	76,125

26. In this way the irrigation entries in Pâr Chapâr and Muzaffarnagar may be held to be amply warranted, and those in Bhûkarheri and Khâtauli to be sufficiently supported by the statistics of the Irrigation Department, and it is only in Jânsath and in Bhûmah Sambalherah that explanation is required. To take the latter pargana first, the area annually irrigated is reduced by the circumstance that rice—and especially the finer rice—is little grown in this pargana, so that the constant kharif irrigation is chiefly that of sugarcane. This being the case, the irrigable area is sufficiently protected with a smaller annual supply of water, in the same way that 2nd ransli, with little or no rice, is sufficiently protected by an annual irrigation of half its area. In Jânsath, on the other hand, the disparity between the area of annual irrigation and that recorded irrigable is owing to the circumstance that in not a few villages with a large proportion of good land, but with insufficient population, a considerable extent of land has come under irrigation, but is watered at longer intervals than is usual elsewhere. It was impossible to record land which had been irrigated three and four times from the canal as otherwise than irrigable, but the fact that much land in certain villages was less highly cultivated than the average, and that it was irrigated at longer intervals, not only influenced the classification of estates, but made it necessary to assess a portion of the pargana at rates considerably below those fixed for the circles in which they were placed. In this pargana too there is much lowlying land, in which irrigation of the cold-weather crops is little required, except in seasons of very deficient rainfall.

General test of accuracy of entries.

27. But of course no such general justification as that which has now been attempted of the entries of soil and irrigation was trusted to in order to ensure correctness. Not only were the soil and irrigation entries tested with the greatest care,

Detailed tests.

but both landlords and tenants were encouraged to satisfy themselves of the correctness or otherwise of the khasras in this respect, and every applicant was allowed, on the deposit of one anna per field, to have tested by a reference to the canal khasras of past years the correctness of irrigation entries. Several thousand entries were in this way tested at the cost of the people, and very many more were tested in the same way without charge when there was good ground for the belief that the objections of the people were well founded. The fact that many objections were made by the landlords to the omission to record as irrigated fields which they asserted to be capable of irrigation is an additional proof that all classes were anxious for a settlement of their claims, and that there was comparatively little attempt at concealment of assets during settlement.

Extension of cultivation and irrigation.

28. To state the change in the condition of the tract concisely, the new settlement records show an increase of the cultivated and irrigated areas as follows:—

Pargana.	CULTIVATED AREA.				IRRIGATED AREA.			
	Old.	New.	Increase.	Per cent.	Old.	New.	Increase.	Per cent.
	Acres.	Acres.	Acres.		Acres.	Acres.	Acres.	
Púr Chapár ...	37,122	42,149	5,027	14	53	20,025	19,972	37,683
Muzaffarnagar ...	39,898	46,436	6,578	16	3,133	20,662	17,529	559
Bhúkarheri ...	34,880	46,271	11,441	33	162	23,917	23,755	14,663
Jánsath ...	43,740	50,319	6,579	15	6,273	24,245	17,972	286
Khátauli ...	38,316	42,223	3,907	10	10,812	24,284	13,472	125
Bhúmah Sambalherah ...	27,557	36,599	9,042	33	1,200	9,499	8,299	692
Total ...	221,423	263,997	42,574	19	21,633	122,632	100,999	467

Even if the whole increase to the cultivated area be not altogether real, a substantial addition of 7 per cent. may safely be assumed, and of the reality and importance of the extension of irrigation there can be no question.

Effect of canal irrigation in dry and in partially watered tracts.

29. And where the increase has been least in the parganas formerly more or less protected by wells, the effect which the substitution of canal for well irrigation has had in improving the standard of cultivation tends to make the change wrought in the condition of parganas previously irrigated as great as in those in which irrigation was formerly unknown. For in the previously irrigated parganas there has not only been an increase in the area under irrigation, but the general substitution of flush canal irrigation for that from wells has set free an amount of labour equivalent to a substantial addition to the population and a large accession to the number of cattle employed in agriculture.

This will be more clearly shown by definite examples, and for this purpose the pargana of Khátauli is the best specimen of a pargana which was fairly and generally protected by wells, while parganas Púr Chapár and Bhúkarheri fitly represent a tract in which irrigation was before the opening of the canal practically unknown. In the last named parganas, the irrigated area has increased from 215 acres in 1841 to 43,942 acres in 1872-74, the difference being one of 43,727 acres; while in Khátauli the irrigated area now stands at 24,284 acres instead of 10,812 acres, being an increase of only 125 per cent. In the latter pargana, however, the opening of the canal has not only led to extended irrigation, but it has led to the substitution of canal irrigation almost invariably flush for the more laborious watering from wells in 6,950 acres. This area is irrigable not annually irrigated, and it may be assumed that the average number of waterings given to irrigable land in this district is about two; so that the labour of men and cattle required to irrigate 6,950 acres twice has been saved by the substitution of flush irrigation from the canal for that from wells. Now the average labour estimated to be requisite for the irrigation on an acre of land from a well with water 20 to 30 feet from the surface is that of 12 persons and 12 bullocks for one day, while 4 men and 16 bullocks can plough three acres of land in a day. The bullock labour alone, therefore, which has been saved is sufficient for the ploughing of 31,234

acres once. Now the area under sugarcane has increased by about 2,000 acres ; and if it be assumed, as is probably fair, that sugarcane cultivation involves eight ploughings in excess of what would be required for another crop, the bullock ploughing power for 16,000 acres would be required for this purpose. And for pressing the cane the estimated bullock labour is 24 bullocks per acre, so that the bullock labour required for this purpose would be equivalent to that required for the ploughing of 3,000 acres; so that, even making allowance for contingencies, such as carting the cane to the mill and such like, the bullock labour saved by the canal is sufficient for all the work connected with the increased cane cultivation and for ploughing 10,000 acres besides. Now the increase to the cultivated area in Khátauli amounts to 3,907 acres, much of it poor soil and not ploughed so frequently as better land bearing better crops. It may therefore with safety be assumed that the bullock labour saved by the substitution of canal irrigation flush for that from wells has been sufficient to provide for the cultivation of the increased area of sugarcane and for the ploughing of the greater part of the area of increased cultivation. The manual labour saved is greatly in excess of that required for the additional ploughing necessary for the improved and extended cultivation now carried on.

30. The above calculations are only rough and approximate. I have not thought it necessary to enquire whether all the labour saved has been saved at a time when it can be all utilized for the purposes to which I have assumed that it has been devoted, or whether some of it is not required for other purposes ; it is all available in a tract like this for improved cultivation. In parganas like Púr Chapár and Bhúkarheri, although the percentage of increase in the area under cane is very great, in the case of the latter almost as great as in Khátauli, yet in parganas of almost identical area the increased acreage of the cane crop is only one half as great as that in Khátauli ; and it seems unquestionable that the more largely increased area, and the more generally maintained quality of the cane crop in that pargana, may be attributed to the labour set free by the canal, without the aid of which even the steadily increasing population and wealth of Khátauli would have been insufficient for the improved cultivation which has now been reached in this pargana. If, therefore, there be reason to regret that canal water has not been more widely distributed and more persistently carried into the drier tracts, it cannot at the same time be questioned that the substitution of canal for well irrigation has in certain tracts accelerated improvement and rendered possible a standard of cultivation which could not otherwise have been reached for many years to come. Unfortunately, however, the advantage, such as it is, is but small in comparison with the numerous disadvantages which the present haphazard system of distribution entails. But these will have to be discussed later, and this digression has been made here merely in order to show that in parganas in which the increase in irrigation has been least the progress of the country has not been less than elsewhere.

Improved standard of cultivation in Khátauli.

31. A comparison of the crop areas now recorded with those entered at Mr. Thornton's settlement is no less indicative of progress than the statistics of irrigation. And as it is important that whatever proof is available should be adduced in support of the crop areas now recorded, I devote a few lines to show that the areas now entered are, as far as the most important entries go, in all probability tolerably correct. The only crops regarding which it can be asserted that where canal irrigation alone is available it is certain to be used are sugarcane and múnji or the finer rice. In most parganas there is here and there some sugarcane on unirrigated land, and in Bhúmáh Sambalherah, until after the close of the settlement operations, the cultivation of sugarcane on unirrigated land was still general. In the northern parganas, Púr Chapár and Bhúkarheri, in this way, correct entries of the cane crop ought slightly to exceed the recorded areas of sugarcane irrigation. In Muzaffarnagar, the area under sugarcane should exceed that of cane land irrigated from the canal by not less than 257 acres grown in villages beyond the reach of canal irrigation ; in Khátauli and

Comparison of statistics of cane and múnji cultivation.

Jánsath the excess of the cane crop over the area watered by the canal should be still greater ; and in Bhúmah Sambalherah, where sugarcane was largely grown on unirrigated land, greatest of all.

With reference to rice there is less certainty. Nearly all múnji is watered, but a good deal of the coarser rice is occasionally irrigated, and no distinction is made between the different varieties of rice in the records of the Canal Department. The area of rice therefore watered from the canal must ordinarily be in excess of the recorded area of the múnji crop, and in all parganas except Khátauli and Bhúmah Sambalherah the margin is amply sufficient ; and in these two parganas a certain extent of múnji is grown in the river valleys, where the crop is cultivated with tolerable success even without irrigation. I think, therefore, that the short comparative statement of crop and canal-irrigated areas of sugarcane and the finer rice tends to confirm the accuracy in certain particulars of the detailed crop statement which follows, and the almost proved accuracy of the recorded area under sugarcane in Púr Chapár, Muzaffarnagar, and Bhúkarheri forms a strong ground for hoping that, taken as a whole, the crop entries are fairly accurate.

Comparative statement of areas of sugarcane and múnji recorded in the settlement papers and those irrigated by the canal in the year of survey.

Pargana.				Recorded area of sugar- cane.	Area of sugar- cane irrigated from the canal.	Recorded area of múnji.	Area of rice irrigated from canal.
Púr Chapár	{ Assessed	2,193	}	2,114	{ 3,034
	{ Revenue-free	...	...	72		
	Total	...	...	2,264		3,219
Muzaffarnagar	{ Assessed	2,634	}	2,737	{ 1,805
	{ Revenue-free	...	...	533		
	Total	...	...	3,167		2,139
Bhúkarheri	{ Assessed	2,549	}	2,596	{ 2,667
	{ Revenue-free	...	...	109		
	Total	...	...	2,658		2,741
Jánsath	{ Assessed	3,104	}	2,658	{ 1,263
	{ Revenue-free	...	...	95		
	Total	...	...	3,199		1,310
Khátauli	{ Assessed	3,814	}	3,961	{ 1,328
	{ Revenue-free	...	...	949		
	Total	...	...	4,763		1,648
Bhúma Sambal- herah.	{ Assessed	2,469	}	1,526	{ 386
	{ Revenue-free	...	...	...
	Total	...	...	2,469		386
GRAND TOTAL	{ Assessed	16,762	}	15,592	{ 10,383
	{ Revenue-free	...	...	1,758		
	Total	...	...	18,520		11,433

Comparison of general
crop statistics.

32. The examination of the final results with the aid of independent tests is the more necessary, because the papers of Mr. Martin's settlement tend to indicate

a falling-off in the area under sugarcane which I could hardly think was real. An examination of the irrigation statistics now convinces me that it was not, and that the recorded areas of the settlement of 1863 were almost certainly exaggerated. It is almost inconceivable that the area of the sugarcane crop in Púr Chapár for example should have been so much in excess of the area irrigated by the canal, and the statement of cane and rice areas watered by the canal given in appendix V. goes far, I think, to prove that the crop statistics of the new settlement papers are more likely to be right than those compiled by my predecessors. I am inclined to think that the sugarcane area may have been in some cases exaggerated, owing to a mistake which rendered necessary the recompilation of the crop statistics in one pargana during the present settlement operations. When I began to inspect Bhúmah Sambalherah, I found that both the cane which was standing or had just been cut, as well as that which had been sown or was about to be sown, had been entered, so that an area nearly double that of the cane crop of the year had been recorded.

At all events I do not think that it is necessary farther to discuss the crop statistics of the recent settlement, and I relegate to appendix VI. those of the settlement of 1863, and confine myself to the consideration of the difference between the crop statistics of 1841, as far as they exist, with those of the present settlement 30 years later. In the abstract statement given below, the less important crops, full details regarding which will be found in the appendix, have been lumped together. The areas of kharif and rabi crops, of sugarcane, cotton, rice, wheat, and barley in 1841 have been obtained from the percentages given in the appendix to Mr. Thornton's printed report. They are necessarily only approximate, for the pargana boundaries have not remained unchanged, but it is likely that they rather overstate than understate the areas under the best crops 30 years ago. For Bhúmah Sambalherah no crop statistics of the old settlement have been obtained.

Number.	Name of pargana.	Settlement.	KHARIF OR RAIN CROPS.										RABI OR COLD-WEATHER CROPS.										Twice cropped.	Ploughed for sugarcane at-ter rain crops.		
			Cane.	Cotton.	Munjl.	Dhan.	Makl.	Jowar.	Charl.	Gowar.	Urd.	Moth.	Bajra.	Other crops.	Ploughed for sugarcane.	Total.	Wheat.	Gram.	Barley.	Wheat and barley.	Ploughed but not sown.	Other rabi crops.			Total.	Garden crops.	Total cultivated area.
1	Pur Chapar,	Mr. Thornton's settlement.	4	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Present revision,	1,485	1,114	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			54	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			2,192	1,763	3,034	930	86	320	2,929	388	3,258	1,740	6,506	538	23,855	10,705	745	3,525	2,964	83	281	18,273	2	43,149	2,300	
2	Muzafargar.	Mr. Thornton's settlement.	4	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Present revision,	1,594	797	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			54	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			2,634	1,474	1,806	1,638	304	743	3,823	370	4,089	2,798	6,190	696	26,608	14,010	1,599	1,936	1,049	351	793	19,738	92	46,436	2,672	
3	Bhukarheri,	Mr. Thornton's settlement.	4	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Present revision,	1,893	697	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			54	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			2,549	1,734	2,667	1,048	177	270	2,764	264	4,608	1,520	8,776	507	27,151	10,296	1,861	5,818	1,392	92	308	19,067	53	46,271	2,148	
4	Jauli Jansath.	Mr. Thornton's settlement.	4	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Present revision,	1,760	875	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			6	31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			3,104	1,659	1,263	1,389	387	705	3,500	362	6,564	2,222	6,894	482	27,824	13,777	2,540	3,283	1,638	78	876	22,175	320	60,319	3,033	
5	Khatauli ...	Mr. Thornton's settlement.	5	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Present revision,	1,916	1,149	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			9	34	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			3,814	1,594	1,228	1,908	931	1,032	4,337	861	3,301	3,296	1,348	703	24,943	14,358	1,668	273	298	105	515	17,317	63	42,223	2,348	
Total of five parganas.			4	24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			9,138	4,632	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			6	32	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			14,293	8,194	9,997	6,913	1,684	2,335	20,780	11,475	27,714	63,146	7,813	4,017	180,879	63,146	7,813	14,894	7,336	709	2,642	96,470	549	237,396	11,901	
5	Bhumah Sam- baherah.	Mr. Thornton's settlement.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Present revision,	64	34	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			2,469	1,167	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Grand Total,		Mr. Thornton's settlement.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Present revision,	64	34	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			16,762	9,391	10,388	7,326	3,119	3,639	19,364	3,471	23,567	16,541	13,882	3,067	4,593	151,995	68,999	9,932	18,272	10,877	780	3,471	111,341	661	263,997	12,841
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
							

83. The most important crops, whether considered in their intrinsic value or as indicating increased care in cultivation, are sugarcane, cotton, and múnji, or the finer rice, and in the rabi, wheat. It has been assumed that múnji was not grown in this tract in 1841, and this assumption is practically correct, although here and there there may have been a little of the crop in the river valleys. In this way, the increase in the rice area is not more important than the improvement in the quantity of the crop. The areas and percentages of increase in the five parganas for the crops of which the statistics are available are as follows :—

Increase in the area of the most important crops.

Pargana.	Sugar-cane.	KHARIF.			RABI.		
		Cotton.	Rice.	Total.	Wheat.	Barley.	Total.
Púr Chapár ... { Area ...	707	619	2,479	3,809	—60	1,669	1,218
... { Per cent. ...	49	55	167	19	...	89	7
Muzaffarnagar ... { Area ...	1,040	677	2,347	5,083	1,255	1,537	1,495
... { Per cent. ...	65	85	187	24	10	385	408
Bhúkarheri ... { Area ...	1,156	1,037	1,973	7,298	3,330	2,335	4,143
... { Per cent. ...	83	149	113	37	48	67	28
Jauli Jánsath ... { Area ...	1,354	784	465	2,017	5,029	—217	4,569
... { Per cent. ...	77	89	21	8	58	6	25
Khátauli ... { Area ...	1,898	445	1,987	3,486	2,863	—110	421
... { Per cent. ...	91	39	172	16	25	29	435
Total ... { Area ...	6,155	3,562	9,151	21,693	12,417	5,214	11,839
... { Per cent. ...	75	77	116	20	24	58	14

The most important crop of all, and that which is the best criterion of improved agriculture, is unquestionably sugarcane. The increase in the area of this crop is very large and is greatest in Khátauli, and after that pargana in Jauli Jánsath, Bhúkarheri, Muzaffarnagar, and Púr Chapár successively. It might be expected that sugarcane cultivation would show the largest extension in parganas in which population had increased most rapidly, and this is the case except with reference to Khátauli, in which pargana population has increased by only '11, compared with '15 in Bhúkarheri and '18 in Jauli Jánsath. But Khátauli has gained much more by the liberation of labour owing to the introduction of canal irrigation than any other pargana, the area in which the canal irrigation has superseded that from wells being 6,950 acres in Khátauli to 3,448 in Jauli Jánsath and 1,437 in Bhúkarheri. It may very safely be assumed, therefore, that the available agricultural labour has increased more rapidly in Khátauli than in any other pargana, so that in this way increased sugar cultivation has followed the increase in the available labour of the population.

Sugarcane.

With regard to cotton the increase is less easily explained. Pargana Bhúkarheri, which has made much progress owing to the industry and increased numbers of its inhabitants, has surpassed all its neighbours in the rapid extension of its cotton cultivation, while Khátauli stands last on the list.

Cotton.

The cultivation of rice has made most progress in Púr Chapár and Muzaffarnagar; after them comes Khátauli, in which before the opening of the canal there was comparatively little rice, while in this respect Jauli Jánsath is far behind. Of the correctness of the entries in this last pargana I do not feel altogether certain, and rice is the crop regarding which errors are most likely to be made, for much of the land under this crop is ploughed up early and sown with gram or other crops.

Rice.

The percentage of kharíf crops has changed but little, but has risen slightly in every pargana except Jauli Jánsath. Improved cultivation tends, by extending the acreage under cane and rice, to increase the area devoted to kharíf crops; and the more waste land is ploughed up, the more land has to be devoted to fodder crops, which are grown during the rains.

So much of the best land indeed is now devoted to the cultivation of rain crops that the area under wheat has been comparatively little extended. In the sandy pargana of Púr Chapár indeed, so much additional land has been devoted to sugarcane, rice, and probably to fodder crops, that there has been no good land to spare for wheat, and the area of the wheat crop is somewhat less than it was. The area under barley is naturally greater than it was, as so much of the increased cultivation has been obtained from the poorer soils.

Wheat and barley.

Rise in prices.

34. But not only has the area under cultivation been extended, and the more valuable crops have been substituted for the less valuable, but the average prices of agricultural produce have risen very considerably. There is no question regarding which there is greater difference of opinion than that of the rise in prices, and it is necessary that the grounds upon which an opinion on the subject has been framed should be stated in detail. I have therefore given in appendix VII. a statement showing the harvest prices at Jalálábád, the chief grain mart in the district. Jalálábád is a town in pargana Thánah Bháwan lying to the north of Shámli, and it is the only mart in the district from which I was able to procure thoroughly trustworthy statistics for a long period. The prices given by Mr. Thornton as the average of 20 years preceding his settlement were obtained by striking the average of all the Thánas in the district, so that it is more satisfactory to compare the prices for different periods obtained from a single mart. Those ascertained by Mr. Thornton for the earlier period and those ascertained for the later period on the eastern side of the district are, however, given for comparison :—

	Múnji.	Dhán.	Maki.	Jowár.	Bájra.	Urd.	Moth.	Til.	Un-cleaned cotton.	Gár.	Wheat.	Gram.	Barley.
	Md. s. c.	Md. s. c.	Md. s. c.	Md. s. c.	Md. s. c.	Md. s. c.	Md. s. c.	Md. s. c.	Md. s. c.	Md. s. c.	Md. s. c.	Md. s. c.	Md. s. c.
Mr. Thornton's 1821-40.	1 2 0	1 11 0	1 2 0	1 4 0	1 3 0	0 35 12	1 0 0	...	...	...	0 36 12	1 2 0	1 14 0
Jalálábád price list, 1821-40.	1 3 3½	1 14 1	1 6 7	1 5 13	0 35 4	0 39 1½	0 31 0	0 19 4	0 20 0	0 21 1	0 37 0	1 6 10	1 11 12
1841-60...	0 39 11	1 7 13	0 39 10	0 38 4	0 31 12	0 35 0	0 34 8	0 16 4	0 16 15	0 17 12	0 35 4	0 44 7	1 11 4
1841-70...	0 36 8	1 4 12	0 35 0	0 34 5	0 28 0	0 30 10	0 30 8	0 14 14½	0 14 7	0 15 12	0 31 12	0 38 9	1 6 9
1851-70...	0 34 9	1 3 14	0 32 12	0 32 12	...	0 23 12	...	...	0 13 2	0 17 0	0 30 14	0 38 3	1 8 2
Khátauli, 1841-70.	0 32 13	0 39 0	0 32 0	0 30 13	...	0 23 13	...	...	0 13 8	0 16 10	0 29 5	0 31 12	1 1 8

Percentage of rise.

From these figures it would appear that at Jalálábád the price of wheat was higher in the 20 years ending with 1870 than it was in the period ending with 1840 by 16 per cent., that of gram by 18, barley 7, jowár 28½, urd 28½, maki 30, múnji 21½, dhán 18½, gur 15½, and cotton 34.

The prices of the various markets generally confirm one another; and where the statistics for Jalálábád are complete, the difference between the rates quoted for that market and for Khátauli are not greater than might have been expected. Jalálábád, situated in the north-west corner of the district, at some distance from the railway, and with no metalled roads, has fewer facilities for exportation than the eastern parganas. The difference is specially great in the case of the rabi grains, for as the rains follow the harvest so immediately, there is little opportunity of transferring to distant markets a portion of the crop. It is least in the price of cotton, which nowadays is moved chiefly by the old means of conveyance; and in that of gár, which is still largely sent away by carts to the western markets, and for the export of this article the situation of Jalálábád is sufficiently favourable.

Improvement in communications.

35. The improvement in communications has been no less important than in other respects. A district situated between the Ganges and Jumna had always considerable natural advantages in the matter of communications; but the rivers were only useful for the export of gram and wheat in one direction, they did nothing at all for the sugar trade. At the time of Mr. Thornton's settlement Muzaffarnagar was connected with neighbouring districts by unmetalled roads only. Since then the metalled road from Meerut through Roorkee to Dehra has been made; a navigable canal has been constructed which, though comparatively little used in ordinary seasons, is a resource of very considerable importance when droughts occur in the eastern districts; and finally in 1868, the Sindh, Panjáb, and Delhi Railway was opened through the district. This line at once connected the district with the railway system of India, and year by year fresh markets have been rendered available for the produce of the district by the steady progress of the railway system in the Panjáb and by the construction of the State line into Rájputána. Beneficial as all these improvements have been to the district as a whole, they have been especially valuable in the Ganges canal tract, through which all these new lines of communication pass.

District roads.

36. Unfortunately, while there is probably no tract in British India for the communications of which more has been done by the State, there are probably few in

which improvement has been less due to local effort. Up to the date of the completion of the new settlement there was no completed metalled road, except the one which had been handed over to the district authorities by the Public Works Department. No tahsil was connected with Muzaffarnagar or with the railway by a metalled road; the important communications with the districts lying to the east and west were practicable only in dry weather, and were rendered difficult even by the cold-weather rain. The unmetalled district roads were generally fair; but this was more owing to the nature of the soil than to any labour or expense incurred in their repair. But if in Muzaffarnagar little has been done for trade by the improvement of communications, much had been done before the mutiny for the comfort of the people, and the long avenues of trees radiating from Muzaffarnagar bear testimony to the energy in this respect of successive district officers. Mr. Astell was the last, and the most unwearied and probably the most skilful arboriculturist, and is credited not only with the long lines of trees which the district owes to him, but also with the less important avenues which must have been planted by his predecessors. But it is only natural that the last and most indefatigable planter of trees should be the best remembered, and since Mr. Astell's days (he left the district in 1852) tree-planting along the roads has become an almost forgotten art.

37. The present population of this portion of the district has already been discussed, and here I need only show the progress of the tract in this respect. The population at the time of Mr. Thornton's settlement is not known, but the statistics of 1853, 1865, and 1872 are all available and are all fairly trustworthy. Unfortunately the detailed figures for 1853 have been lost, and only the pargana totals are known. In this way the comparison in the case of the parganas with a considerable extent of area in the Ganges valley can only be general, except with reference to the two last enumerations. Reserving details not absolutely necessary, I give in the following abstract the totals for the various parganas, which are arranged separately, according as the figures are affected or not by the inclusion of villages in the valley of the Ganges:—

Increase of population.

Pargana.	Year.	Total population.	Total agricultural population.	Rate of population per square mile of cultivated and culturable area.	Rate of population per square mile of total area.	Rate of agricultural population per acre of cultivated and culturable area.	Rate of population per acre of cultivated and culturable area.
Pār Chapār ...	1853	31,659	16,844	411	352	343	645
	1865	33,261	18,223	438	362	370	679
	1872	32,835	18,278	...	...	...	...
	Upland	32,804	13,251	443	369	378	690
	Valley	81	27	...	...	...	...
Bhūkarheri ...	1853	34,420	19,203	351	284	306	549
	1865	36,959	14,541	349	280	314	544
	1872	34,024	13,424	...	...	...	...
	Upland	2,935	1,117	...	...	...	...
	Valley	39,576	15,812	...	...	...	...
Bhūmah Sambalherah.	1853	36,680	14,020	432	363	358	676
	1865	38,996	17,792	...	...	...	...
	1872	34,509	19,693	342	272	305	524
	Upland	34,452	13,656	328	276	303	512
	Valley	29,384	10,226	...	...	...	...
Muzaffarnagar ...	1853	5,068	3,420	...	...	...	...
	1865	36,000	14,547	...	...	...	...
	1872	31,628	11,618	510	416	394	600
	Upland	4,372	2,922	...	...	...	...
	Valley	45,642	19,148	513	427	336	602
Jauli Jānsath ...	1853	49,548	16,368	533	522	374	830
	1865	48,653	15,721	507	446	359	792
	1872	31,271	19,911	377	356	377	592
	Upland	34,543	14,777	397	366	365	621
	Valley	37,097	15,931	426	382	385	663
Khātauli ...	1853	44,351	26,932	510	457	486	800
	1865	45,643	19,137	530	490	349	832
	1872	49,256	18,410	578	507	335	895
Total of six parganas.	1853	221,852	121,730	416	350	357	650
	1865	224,376	92,403	424	370	361	662
	1872	226,873	87,165	...	...	...	...
	Upland	8,003	5,238	...	...	...	...
	Valley	242,417	93,899	...	...	...	...
Total of six parganas.	1853	226,118	89,151	482	415	384	753
	1865	7,299	4,748	...	...	...	...
	1872	...	...	...	...	...	...
	Upland	...	...	...	...	...	...
	Valley	...	...	...	...	...	...

Increase examined in detail.

38. In parganas Bhúkarheri and Bhúmah Sambalherah the whole of the increase in the population of the upland cannot be clearly traced, but it is almost certain that the population of the valley has been falling off, and since 1872 the irrigation from this tract has become much more serious than before.

In all parganas there has been an increase in the population since 1853. It has been least of all in Púr Chapár, in which pargana, as also in Muzaffarnagar, there has been a falling-off since 1865.

Púr Chapár and Bhúkarheri are very similar parganas: in both there is an enormous percentage of poor soil; both have been changed since 1853 from entirely dry to fully irrigated tracts. In the former the increase to the population has been trifling, in the latter it has been very great. This is to a certain extent explained by the fact that even now, after the accession to the number of the people, the population of Bhúkarheri is still not quite so dense as it is in Púr Chapár. In other words, Bhúkarheri is only, now that irrigation is general, able to attract and support the population which its neighbour owned by proprietary communities supported before the construction of the canal.

Similarly in Jauli Jánsath the large increase to the population has only brought the standard of population up to the average of the tract. In Bhúmah Sambalherah the gradual depopulation of the valley villages has made the increase in the population of the whole pargana less important than in all likelihood it would otherwise have been, and the progress made in the upland between 1865 and 1872 is very considerable.

In Muzaffarnagar, and to a still greater extent in Khátauli, a fairly sufficient population has increased considerably; but even in Khátauli, when the superiority of the soil and cultivation are considered, the population is practically no greater in comparison with the resources of the pargana than elsewhere. Emigration from the more thickly inhabited portions of the Meerut district has to some extent contributed to the increase of the population of Jauli Jánsath and Khátauli.

Recent falling-off in two parganas.

39. In most parganas the increase in the population has continued up to 1872; indeed, in most parganas the progress made during the seven years between 1865 and 1872 has been greater than in the earlier and longer period. In two parganas only—Muzaffarnagar and Púr Chapár—has population increased in the earlier period and fallen off again in the later. In Muzaffarnagar the decrease is more than accounted for by the falling-off in the population of the dry villages situated on the west bank of the Káli river, which may safely be attributed to the drought, which induced emigration to the insufficiently inhabited villages watered by the canal. But a considerable portion of the falling-off in the population of the pargana as a whole was probably accidental, for during the period in question the population of the town of Muzaffarnagar fell from 11,314 in 1865 to 10,636 in 1872, being a decrease of 678, or 6 per cent. This falling-off, or at least the greater part of it, may safely be attributed to the completion of the railway and the departure of the workmen who were temporarily attracted to the town.

In Púr Chapár the decrease is far more than accounted for by the falling-off in the population of seven rice villages, in which the decrease amounts to 1,084, being nearly 10 per cent. In these villages the mortality during the recent fever epidemic was very great, and was caused, it is to be feared, in some measure by the excessive area of rice cultivation.

The statistics of the tract when examined in detail show clearly enough that there is no necessary connection between canal irrigation and a decreasing population; on the contrary, population has increased in a marked manner in this tract only in those estates which are sufficiently watered by the canal, and has fallen off only in those irrigated villages which have been oversaturated or in which drainage has been constructed or neglected.

While the total population of the six parganas has increased between 1853 and 1872 by 20,565, or nearly 10 per cent., the agricultural population would appear to have fallen off by 27,831, or 23 per cent. But this is clearly owing to a difference of classification, the day labouring class having been considered agricultural in 1853 and non-agricultural in 1872. The addition of three-fourths of the Chamárs, the great day labourer caste, to the number now recorded agricultural would bring this class of the population up to the figure recorded in 1853.

40. During the 30 years therefore that had elapsed between the settlement of Mr. Thornton and that now concluded, the following improvements had taken place:—

Progress during 30 years summarized.

- (1) The area under cultivation had been increased 19 per cent.
- (2) The area under irrigation had increased 466 per cent.
- (3) The prices of agricultural produce had risen by about one-fifth.
- (4) A metalled road, a navigable canal, and finally a railway, had been opened through the tract.
- (5) Population had increased by 10 per cent.
- (6) Owing to the substitution of canal for well irrigation in 12,695 acres much agricultural labour had been saved.

41. Some of the results of all these changes have been already stated—the improvement in cultivation, the extended area of the better crops, and the increased productiveness of the soil and the greater certainty of a harvest. The effect of all the changes that have taken place upon the letting value of the land have still to be considered. The adjustment of rents with reference to the recent settlement was generally completed by 1862-63, and the recorded rent-roll of the Ganges canal upland amounted in the year 1863-64 to Rs. 6,67,422. The actual rent-roll of the year of Mr. Thornton's settlement (1841) cannot be ascertained, but it will be safe to assume for the whole tract that the assessment was about two-thirds of the assets. On this assumption the rent-roll of 30 years ago would amount to Rs. 4,85,943, the assessment being Rs. 3,23,962-7-6: so that, taking the year of adjusted rent-rolls as indicating fairly the rental of the tract, there had been an increase in the assets amounting to Rs. 1,81,479, or 37 per cent. During the interval of 20 years there had been, according to the papers of the recent settlement, an increase of cultivation to the extent of 28,543 acres, and in the irrigated area of 97,807 acres. The average value of the increased cultivation could hardly have been less than Rs. 2 per acre, and the increased value of the land that had come under irrigation could not have been on the average less than the same sum. At these rates the addition to the rent-roll would have been Rs. 2,52,700, whereas it was only Rs. 1,81,479. And no allowance had been made for the rise in prices, the distinct addition to the population and labour of the pargana, and the consequent increased competition for land and the gradual tendency towards a rise in rents. And over and above this, the rates of Mr. Thornton's settlement were unquestionably low, and it is almost certain that the annual rental of the tract was even in 1841 greater than the assessment took for granted; and some addition would have to be made to the assumed assets of Mr. Thornton's settlement in order to make the rental a sufficient one. In this way the increase assumed by the rent-roll of 1863-64 was altogether inadequate.

Effect of progress on the assets of the tract.

42. And this rent-roll was not even the normal rental of the village papers. Commutation of rent in kind into money rents had been frequent, and the new assessments in this way very generally guided the new rent-rolls, and the assessments had, as has already been shown, been based upon the rates assumed by Mr. Thornton. It is hardly to be wondered, therefore, that the rent-rolls at once began to rise. The real value of the land began to assert itself, and within three years the rental had been enhanced by more than 17 per cent.; and before the inquiries with reference to permanent settlement had been completed, the rental had risen permanently to a standard nearly one-third in excess of that of Mr. Martin's settlement. And there is

Rise of rent-rolls after Settlement of 1863.

no reason to believe that in the interval the productiveness of the tract had greatly changed. Progress had continued, but had not suddenly begun; and the rental of the year in 1872-73, which may be roundly stated at Rs. 8,67,000, cannot be held to indicate that the value of land had increased enormously in ten years; it merely helps to prove that the rent-roll of Mr. Martin's settlement was inadequate.

The rates of Mr. Thornton's settlement, more especially in the southern parganas, were so low that it is hardly likely that the assumed rental of 1841 is adequate, and it is probably safe to enhance the Rs. 4,85,943 of assumed rental to Rs. 5,50,000. Until the time of Mr. Martin's settlements rents were in the great majority of cases taken in kind and by crop rates. Where rents were taken in kind, the rise in prices operated at once and the cultivation of the better crops paying crop rates was encouraged. The rise in prices, therefore, up to the end of 1860, amounting to about 20 per cent., may fairly be held to have added 10 per cent. to the rental. Besides this, there have to be added the rental of 28,543 acres increased cultivation and of 97,807 acres increased irrigation. The calculation would then stand—

	Rs.
Assumed rent-roll in 1841	5,50,000
Increase of 10 per cent. owing to rise in prices	55,000
Rental of 28,543 acres of increased cultivation	57,086
Increased rental of 97,807 acres on account of irrigation	1,95,614
Total	8,57,700

The rent-rolls of recent years closely approximate to this sum, and in the year of drought far exceeded it. As kind rents and crop rates are charged in the village papers for the land cultivated by proprietors, and as recent high prices have largely increased the money value of such rents, no allowance for sîr and other cultivation of proprietors is required, and the recorded rentals may be accepted as additional proof of the large excess of the existing assets of the tract over those assumed in 1841.

Rent-roll statement.

Number.	Pargana.	1871 faali (1863-64.)	1872 faali (1864-65.)	1873 faali (1865-66.)	1874 faali (1866-67.)	1875 faali (1867-68.)	Total of 5 years.	Average of 5 years.	1876 faali (1868-69.)	1877 faali (1869-70.)	1878 faali (1870-71.)	1879 faali (1871-72.)	1880 faali (1872.)	Total of 8 years.	Average of 8 years.	Total of 10 years.	Average of 10 years.
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1	Pûr Chapâr ...	1,14,878	1,32,987	1,35,771	1,57,754	1,44,384	6,75,639	1,35,128	1,76,706	1,89,170	1,51,165	1,49,286	1,37,104	8,05,461	1,51,090	1,481,800	1,48,180
2	Muzaffarnagar,	1,33,466	1,40,603	1,48,713	1,49,392	1,42,706	7,14,780	1,42,956	1,40,196	1,56,671	1,58,000	1,53,519	1,47,632	7,51,218	1,52,244	1,476,800	1,47,680
3	Bhûkarheri ...	1,05,694	1,20,481	1,25,648	1,25,629	1,29,602	6,06,002	1,21,000	1,21,155	1,49,331	1,36,518	1,36,598	1,49,478	7,01,978	1,40,396	1,208,800	1,20,880
4	Jânsath ...	1,18,728	1,81,622	1,32,639	1,34,689	1,27,121	6,54,734	1,30,947	1,29,808	1,79,599	1,67,874	1,61,316	1,62,619	8,42,716	1,68,525	1,591,400	1,59,140
5	Khatauli ...	1,24,964	1,34,725	1,27,238	1,39,526	1,45,141	6,81,589	1,36,318	1,57,584	1,76,379	1,71,114	1,78,073	1,79,324	8,57,734	1,71,547	1,528,300	1,52,830
6	Bhûmah Sam- balherah.	69,702	71,278	75,589	75,981	79,700	3,72,210	74,420	76,341	91,183	82,468	83,579	90,996	4,34,270	86,864	7,94,200	79,420
	Total ...	6,67,422	7,21,618	7,58,591	7,82,771	7,78,564	37,03,954	7,40,791	8,05,040	9,23,436	8,46,549	8,62,069	8,67,163	43,93,397	8,78,874	13,91,320	8,78,874

CHAPTER IV.

INSPECTION ; PROPOSED RATES ; ASSESSMENT AND FINANCIAL RESULTS.

By the time that inspection had begun, the people at large had become fully alive to the importance to themselves of accurate soil entries, and the tenants evinced the utmost interest in settlement operations. The landlords too, after their recent experiences, were aware of the danger of scheming for low assessments, which might be made the basis of insufficient rent-rolls. In this way the settlement officer had at inspection the benefit of the assistance of at least one of the parties interested, and in most cases the entries regarding soil and irrigation became the subject of dispute between the landlord and his tenants. Every effort was made to secure moderation in both respects, and ordinarily inspection involved alterations distinctly in favour of the people. The tendency of subordinates to show their zeal for the interests of Government, and to shield themselves from all possible charges of collusion with the people, is nowhere more likely to lead to an overstatement of advantages than in a tract such as this, in which unquestionable sand passes gradually into good loam, and in which there is often as much room for honest doubt with reference to the soil entries as in regard to those of irrigation. For the correctness of the soil entries the only effective guarantee is efficient supervision and thorough testing, and every effort was made at inspection to make the soil entries accurate and safe.

Inspection and cor-
rection of soil entries.

It is matter for regret that the simple device first introduced by Mr. Elliott in Fatehgarh, of systematically marking the different patches of soil on the map, was not made use of. Subsequent experience has convinced me of the great utility to the inspecting officer of this simple improvement, and it greatly facilitates the work of district officials who may later have to use the settlement records. But if the permanent demarcation of soil patches was not thought of, every care was taken to secure correct soil entries in the khasra, and I hope that experience may prove these entries to have been fairly accurate.

2. With reference to irrigation, the statistics of the Canal Department furnished information which was constantly used to check the entries of the khasra, and no field was ordinarily recorded as irrigated which had not been watered in ordinary seasons as well as during years of drought. This caution may have led to the exemption of fields which might fairly have been assessed at irrigated rates ; but in a district watered from the canal, it is impossible, unless in exceptional circumstances, to assess with confidence on any basis other than the experience of past years. Land may be capable of irrigation, but unless there is labour and manure sufficient for its careful cultivation, its irrigation will be only occasional, and it would be impossible to levy irrigated rates from land watered at the considerable intervals which happily intervene between seasons of extreme drought.

Irrigation entries.

In villages watered from wells money rents were fortunately general, and, having been recently fixed or enhanced, indicated fairly the limits of irrigation. An area of twenty acres was held to be as much as could ordinarily be secured by a well working a single run.

3. The correction of the soil entries was rendered extremely difficult by the progressive condition of the tract, and it is likely that, before another settlement is entered upon, many difficulties in this respect will be removed. But at present the areas of irrigation and of the more careful cultivation are by no means fixed, and much land is in a transition state between the unproductiveness of its natural quality and the improved condition to which under careful cultivation it will one day no doubt attain. This circumstance renders moderation in soil entries and in the rates assumed, more especially for the poorer soils, absolutely necessary, and it is in this respect that the data of the present revision will soonest become obsolete, and the most distinct improvement may be looked for during the period of settlement.

Progressive condition
of the tract.

When canal irrigation is first extended to a village, the fields which come first under irrigation are those in the better land which have previously been carefully cultivated. Gradually the area of carefully cultivated land is extended, and in villages in which the quantity of naturally fertile soil is limited, the poorer lands come under the better crops and are irrigated and manured. Eventually, after years of careful tillage, after repeated manuring, such land becomes good and productive; but at first, when the limits of the more careful cultivation are not fixed, and the more laborious farming is tentative rather than permanent, there is some difficulty in classifying it with accuracy as well as safety. The work of inspection was in this way difficult as well as laborious, and the final correction of the irrigation entries involved much investigation in the office as well as observation in the field.

classification of estates.

4. The next step was to classify estates. Canal irrigation had done much to equalize villages, but the numbers of the resident population, the caste of the cultivators, and the circumstances of the people were still almost as important as of old. Assessment by circles was no new thing in this district, and my immediate predecessors had implicitly followed in this respect the example of Mr. Thornton. And I think that the system is justified on other grounds than because it is an old one. There is no question that even now, when facilities for irrigation are, comparatively speaking, so generally equal, the differences in the value of land in various villages are still very great, and in my opinion the comparison of similar estates is an important help towards fairness and equality in assessment. It is of course still more unquestionable that a slavish devotion to the circle system of assessment might lead to great inequality and injustice, for many an estate which on general grounds is placed in one circle has certain soils similar to those of other circles. This is more especially the case with reference to otherwise first class estates, which extend in one direction into the middle of an unfertile sand plain, and may in this way contain some of the best land as well as some of the worst in the pargana. To assess the bad land at the rates of the best circle would be as fatal to the people as the assessment of the good land at the rates of the circle into which the worst land alone would fall would be injurious to Government. But it is no objection to the classification of estates that the system is not infallible, and must be used with judgment as a help, rather than blindly as a guide to fair and accurate assessments.

number of circles.

5. In each pargana three circles were formed, containing the best, average, and inferior estates. As has already been remarked, settlement by parganas had its advantages under the peculiar circumstances of this revision, but at a future settlement it will probably be better to settle by tahsils; and in this tract two sets of three circles, or perhaps even one, will be sufficient instead of the six sets of circles which have now been adopted.

statement of areas and

6. The details regarding each circle are given in the pargana reports, and it will be sufficient to place on record here the cultivated soil areas of the various circles, the rates which were ascertained, and those which were assumed.

Pargana.	Circle.	Irrigated bārah.						Irrigated 1st ramali or loam.					
		Area in circle.	Area of ascertained rental.	Percentage to area.	Ascertained rental.	Ascertained rate.	Assumed rate.	Area in circle.	Area of ascertained rental.	Percentage to area.	Ascertained rental.	Ascertained rate.	Assumed rate.
Pār Chāpār.	I.	8	...	...	Rs. a. p. ...	Rs. a. p. ...	Rs. a. p. 12 0 0	6,081	2,667	47	Rs. a. p. 18,078 0 0	Rs. a. p. 6 4 10	Rs. a. p. 6 0 0
	II.	11	8	72	112 0 0	14 0 0	12 0 0	5,873	2,990	50	17,104 0 0	5 10 11	5 4 0
	III.	1	1	100	7 8 0	7 8 0	6 0 0	770	770	100	3,674 10 4	4 9 1	4 5 0
		20	9	45	119 0 0	12 11 2	...	12,724	6,627	53	38,758 10 4	5 13 6	...
Mumaffar-nagar.	I.	23	19	82	252 11 0	13 4 9	12 0 0	7,978	3,952	50	26,068 10 0	6 9 6	6 12 0
	II.	47	25	53	229 0 6	9 2 6	9 0 0	5,758	2,573	44	13,141 4 11	5 1 8	5 10 0
	III.	21	14	66	171 0 6	12 3 5	6 0 0	2,827	1,301	33	6,976 12 6	5 4 6	4 14 0
		91	58	63	652 12 0	11 4 1	...	17,563	7,826	45	46,086 12 5	5 14 3	...
Bhākar-bodī.	I.	35	22	62	191 6 11	8 11 3	10 0 0	8,614	3,409	39	21,527 7 5	6 7 11	5 12 0
	II.	12	1	...	5 10 0	5 10 0	7 8 0	8,142	2,721	33	14,914 14 8	5 7 8	5 1 0
	III.	...	...	...	...	...	6 0 0	1,005	178	17	678 3 11	3 12 11	3 12 0
		47	23	49	197 0 11	8 9 1	...	17,761	6,309	35	37,120 10 0	5 14 1	...
Jaulī Jānsath.	I.	241	187	77	2,599 6 0	13 1 4	12 0 0	4,050	3,009	75	19,724 11 0	6 8 10	6 12 0
	II.	66	22	33	227 3 0	10 12 4	9 0 0	15,652	10,282	65	52,620 5 0	5 2 0	5 10 0
	III.	13	...	...	...	...	9 0 0	1,975	664	33	3,122 7 0	4 11 2	4 8 0
		320	209	65	2,836 9 0	13 9 2	...	21,677	13,935	64	75,467 7 0	5 6 7	...
Khātāuli.	I.	32	27	84	269 4 0	9 15 7	12 0 0	9,468	5,627	58	35,884 15 0	6 4 5	7 2 0
	II.	20	17	85	123 3 0	7 3 11	12 0 0	9,854	3,749	37	21,196 3 1	5 10 9	6 0 0
	III.	10	...	...	...	...	9 0 0	3,223	625	19	3,308 14 0	5 4 8	5 0 0
		62	44	71	392 7 0	8 14 8	...	22,745	9,992	43	59,890 0 1	5 15 10	...
Bhāmāh Sambal-borah.	I.	99	21	21	162 13 0	7 12 1	12 0 0	3,289	1,521	46	9,236 6 0	6 1 2	6 6 0
	II.	13	7	53	44 10 0	6 6 0	7 14 0	2,593	1,468	56	7,870 7 0	5 5 9	5 4 0
	III.	...	...	...	...	...	...	780	167	21	681 5 6	4 1 3	4 8 0
		112	28	25	207 7 0	7 6 6	...	6,662	3,156	47	17,786 2 6	5 10 2	...
Total...		652	371	57	4,403 3 11	...	...	99,182	47,914	48	275,111 10 4	...	...
		29,132	17,214	46	275,111 10 4	...	...	...	...	...	...	...	...
		22,843	9,212	40	34,596 6 8	...	...	...	...	...	...	...	...
		27,672	14,691	53	47,044 12 8	...	...	...	...	...	...	...	...
		39,436	12,996	32	25,903 0 0	...	...	...	...	...	...	...	...
		75,875	26,902	35	32,817 15 2	...	...	...	...	...	...	...	...
		26,5615	112,086	46	4,12,879 8 9	...	...	...	...	...	...	...	...

Tahsil.	Pargana.	Circle.	Irrigated 2nd rauasi or sandy loam.						Dry 1st rauasi.					
			Area in circle.	Area of ascertained rental.	Percentage to area.	Ascertained rental.	Ascertained rate.	Assumed rate.	Area in circle.	Area of ascertained rental.	Percentage to area.	Ascertained rental.	Ascertained rate.	Assumed rate.
MUZAFFARNAGAR.														
Pur Chapar.	I.	I.	2,349	548	24	2,307 7 0	4 3 4	4 3 0	356	356	100	1,138 9 10	3 3 2	3 1
		II.	2,956	1,473	50	5,367 6 0	3 10 0	3 12 0	793	440	55	1,509 3 0	3 6 10	3 4
		III.	1,076	596	55	2,203 4 8	3 11 2	3 3 0	587	538	91	1,302 14 0	2 6 8	2 14
	Muzaffarnagar.	I.	I.	7,281	2,617	36	9,878 1 8	3 12 5	...	1,736	1,334	77	3,950 10 10	2 15 5
II.			959	449	47	2,112 15 11	4 11 3	4 8 0	324	254	78	786 4 6	3 1 6	3 4
III.			1,140	560	49	1,739 12 5	3 1 5	3 12 0	1,586	570	30	1,744 12 8	3 0 11	3 4
Bhukarheri.		I.	I.	909	463	51	1,304 10 4	2 12 1	3 6 0	4,553	1,623	35	5,270 12 3	3 3 11	3 14
	II.		2,008	1,472	48	5,147 6 10	3 7 11	...	6,463	2,447	37	7,801 13 5	3 3 0	...
	III.		1,778	505	28	1,408 0 0	2 12 5	4 2 0	922	221	23	371 3 3	1 10 16	3 1
	Jauli Jansath.	I.	I.	2,167	1,296	41	5,078 1 0	3 14 8	3 6 0	610	101	16	304 8 9	3 10 3	3 14
II.			1,164	194	16	551 4 4	2 12 5	2 10 0	778	166	21	383 13 6	2 4 10	3 4
III.			6,109	1,995	32	7,037 5 11	3 8 5	...	2,310	488	21	1,059 14 6	2 3 9	...
Khatauli.		I.	I.	626	344	54	1,534 15 0	4 7 5	4 8 0	328	186	56	641 6 0	3 7 2	3 6
	II.		1,383	726	52	2,659 12 6	3 10 7	3 12 0	5,162	5,170	99	17,620 4 9	3 6 6	3 6
	III.		239	65	27	239 1 0	3 10 10	3 6 0	1,647	463	22	1,244 12 6	2 11 0	3 14
	Bhumah Sambalherah.	I.	I.	2,248	1,135	50	4,433 12 6	3 14 6	...	7,157	5,819	81	19,506 7 3	3 5 7
II.			545	271	50	1,635 5 0	6 0 6	4 14 0	634	634	100	2,144 5 4	3 6 1	3 14
III.			683	250	36	1,018 7 0	4 1 2	4 8 0	2,792	1,182	42	3,804 3 0	3 3 5	3 6
Bhumah Sambalherah.		I.	I.	249	225	90	623 6 6	2 12 0	3 12 0	2,383	604	26	1,698 2 6	2 12 11	3 6
	II.		1,477	746	50	3,277 2 6	4 6 2	...	5,809	2,420	41	7,646 10 10	3 3 6	...
	III.		872	384	44	1,765 8 6	4 9 8	4 14 0	1,586	948	59	3,164 6 9	3 5 4	3 14
	Bhumah Sambalherah.	I.	I.	1,112	623	55	2,300 2 9	3 11 2	3 12 0	1,939	994	51	3,304 12 4	3 5 2	3 6
II.			741	242	32	766 14 0	3 2 8	3 3 0	673	241	35	610 0 9	2 3 6	3 6
III.			2,725	1,248	47	4,832 9 3	3 13 11	...	4,197	2,183	52	7,079 3 10	3 3 10	...
			22,848	9,212	40	34,596 6 8	...	...	27,672	14,691	53	47,044 12 8	...	...

Dry 2nd raveli.						Dry bhâr.					
Area in circle.	Area of ascertained rental.	Percentage to area.	Ascertained rental.	Ascertained rate.	Assumed rate.	Area in circle.	Area of ascertained rental.	Percentage to area.	Ascertained rental.	Ascertained rate.	Assumed rate.
			Rs. a. p.	Rs. a. p.	Rs. a. p.				Rs. a. p.	Rs. a. p.	Rs. a. p.
2,110	891	42	2,003 3 2	2 3 11	2 4 0	5,132	2,419	47	3,414 8 0	1 6 7	1 5 0
2,166	883	41	2,137 8 0	2 6 9	1 14 0	5,268	2,303	41	2,938 12 0	1 5 4	1 2 0
2,016	411	20	791 11 0	1 15 0	1 8 0	3,697	1,439	39	2 137 15 0	1 7 9	1 0 6
6,391	2,175	34	4,891 5 0	2 3 11	...	14,097	6,061	43	8,491 3 0	1 6 5	...
569	354	62	815 14 7	2 4 10	2 4 0	1,645	585	23	564 1 7	1 7 5	1 8 0
1,724	507	29	792 13 3	1 9 0	1 11 0	6,532	1,561	24	1,433 10 1	0 14 8	1 2 0
6,873	1,852	27	3,087 12 0	1 10 8	1 8 0	16,676	2,012	12	2,144 2 3	1 1 0	0 15 0
9,166	2,713	29	4,696 7 10	1 11 8	...	24,881	3,958	16	4,141 13 11	1 0 8	...
1,393	343	25	639 1 3	1 13 9	2 0 0	1,852	312	17	423 14 3	1 6 1	1 5 0
2,879	698	24	1,503 15 6	2 2 5	1 11 0	8,629	2,345	27	3,037 9 10	1 4 2	0 15 6
3,386	328	9	522 14 2	1 9 5	1 5 0	1,902	223	11	232 0 2	1 0 8	0 13 0
7,658	1,369	18	2,665 14 11	1 15 2	...	12,383	2,680	22	3,653 8 3	1 4 5	...
526	346	68	743 9 0	2 2 4	2 4 0	1,036	337	23	346 12 0	1 7 5	1 8 0
3,495	2,789	80	4,914 12 0	1 4 9	1 11 0	9,326	5,418	58	6,126 9 0	1 2 1	1 2 0
1,179	304	17	310 5 0	1 8 4	1 8 0	3,355	409	12	421 0 0	1 0 5	0 15 0
6,300	3,339	64	5,968 10 0	1 12 7	...	13,717	6,064	44	6,894 5 0	1 2 2	...
627	319	50	939 8 8	2 12 6	2 10 0	656	257	39	439 6 0	1 11 4	2 0 0
2,735	579	21	1,417 13 0	2 7 2	2 4 0	2,386	948	59	990 4 0	1 0 8	1 8 0
2,422	213	9	422 14 0	1 15 7	2 2 0	3,214	361	10	439 14 0	1 3 5	1 2 0
5,774	1,111	29	2,800 8 8	2 8 3	...	6,356	1,566	24	1,869 8 0	1 3 1	...
1,331	706	51	1,596 8 9	2 4 2	2 7 0	2,887	1,227	42	1,643 15 6	1 5 4	1 8 0
1,925	889	46	1,860 7 0	2 1 4	2 0 0	8,742	3,621	41	4,458 13 3	1 3 8	1 2 0
3,041	694	34	1,433 11 0	2 0 10	1 11 0	5,927	1,525	25	1,634 11 3	1 1 2	1 0 6
5,347	2,289	42	4,880 10 9	2 2 1	...	17,556	6,373	31	7,737 8 0	1 3 5	...
39,436	12,996	33	25,901 0 0	...	...	7587 5	26,902	35	32,817 15 2	...	...

Increasing prevalence
of money rents.

7. Up to the close of the period of Mr. Thornton's settlement money rents were exceptional, and on this side of the district rents were taken in kind or by valuation of the crop, and by crop rates for sugarcane, cotton, and chari, and less invariably for Indian-corn.

At Mr. Martin's settlement money rents were very generally fixed in commutation, but as was proved during the investigation with reference to permanent settlement, these commuted rents were fixed on a wrong system by the Settlement Deputy Collector, who not unnaturally held that as the assessment had been fixed on the theory of half assets, a suitable rent-roll would be obtained by doubling the assessment. Rent-rates fixed on such a principle could not be looked upon as very valuable indications of the value of land, and have not been included in the preceding statement; they were as a rule distinctly below those ascertained and assumed for the better soils, and were, when the assessment of the several parganas was taken up, applied to 57,955 acres throughout the tract.

The existing rates upon which the assumed rent-rates were based were those which had been fixed by agreement in commutation or after suits for enhancement since settlement. As many of these rates had been fixed by the assessing officer himself, they were liable to objections on that ground, and the fact that in many cases their fitness had not been proved by sufficient experience rendered the basis of assessment less satisfactory than it would otherwise have been. For, as far as the area of ascertained rents was concerned, the basis was fairly sufficient, more especially in the case of the better soils, whether irrigated or dry.

Rates tested by ex-
perience.

8. I was a good deal influenced in the fixation of the assumed rates by the exceptionally intimate acquaintance with, and practical experience of the tract, which I had gained during two inspections; the first with a view to permanent settlement, and the second prior to re-assessment. Later I had an excellent opportunity of correcting my estimates, when I received charge of three properties under the Court of Wards. The management of estates or portions of estates brought me face to face with the difficulties of the rent-roll, which is the real test of all rates. A very serious mistake in assessment may pass comparatively unnoticed, but the margin left in favour of the tenant is necessarily much smaller, and any mistake in the direction of an exaggerated estimate of the value of land is quickly exposed by the outcries of the people and by the difficulty in collection. And the position of a settlement officer as manager of Court of Wards' estates is one peculiarly favourable for a fair judgment of the capabilities of the land. He finds himself the guardian of the interests of members of a class which was almost necessarily in this district regarded from a revenue point of view with a certain amount of suspicion and distrust. At the same time he feels himself very directly responsible for the welfare of the cultivating classes who are committed to his care, and direct contact with whom can hardly fail to be useful. The agents and friends of the families are also of service; they are naturally anxious for a full rent-roll, and are at the same time afraid lest an excessive one should lead to an excessive jama. And finally, the collection of rents brings home to the assessor of revenue the difficulties which even in a prosperous tract beset the landlord, the fatal facility with which tenants fall into arrears and embarrassment, the frequent difficulty of collecting rents punctually even from solvent tenants, and furnishes profitable experience to the settlement officer and gives him increased confidence in the rates he may assume if they stand the practical test of experience. The enhancement was ordinarily so great that the chief danger was that of going too high; and rates which were acquiesced in by persistent and independent cultivators, and were proved to be moderate by the high prices obtained for land even before assessment, when the rates assumed, and not the jamas eventually fixed, were known, could be accepted with confidence.

Assumed rates, generally
lower than those ascer-
tained.

9. A detailed comparison of the rates ascertained with those assumed, shows that in the case of all soils except irrigated 2nd rausli the assumed rates were ordinarily less than those ascertained, and in the case of this soil there were sufficient reasons for

considerable divergence in the rates. In one circle or pargana 2nd rausli had been ordinarily classed with 1st rausli, and, as in the 1st circle of Khátauli, the rent-rate was abnormally high; in others again the land had come recently under irrigation, and the dry rates which had been maintained brought down the average rent-rate for this soil.

Except with reference to this soil the assumed rates were sufficiently supported in all parganas except Khátauli and Jauli Jánsath, and in respect of them the adjacent parganas of Meerut furnished information which it would have been impossible to neglect.

10. The subjoined statement shows the extent to which in each circle the revenue actually assessed differed from that indicated by the assumed rates. In the three parganas adjoining Meerut, in which the assumed rates were the highest, and more especially in the two parganas first assessed, those of Khátauli and Jauli Jánsath, the enhancement involved was so great that I was afraid to take the whole of it, more especially as at that time progressive assessments were forbidden. In this way, in the parganas in which the assumed rates were highest and were most likely to be excessive, the assessments were fixed at 9 per cent. below the amount indicated by the rates.

In parganas subsequently settled the rates assumed were moderate and the assessments more nearly followed the rates.

Divergence between the result of assumed rates and assessments.

Pargana.	Circle.	Jama by assumed rates.	Jama actually assessed.	Former jama.	Percentage of difference between assumed rate jama and former jama.	Percentage of difference between jama actually assessed and old demand.
		Rs. a. p.	Rs. a. p.	Rs. a. p.		
Páv Chapár ...	I.	29,338 9 0	30,900 0 0	27,800 0 0	5·17	11·15
	II.	29,082 9 0	30,160 0 0	24,514 0 0	18·63	23·03
	III.	7,566 14 2	8,490 0 0	6,980 0 0	8·86	22·16
		65,888 0 3	69,550 0 0	59,264 0 0	1·118	17·35
Musaffarnagar ...	I.	31,657 2 0	30,250 0 0	33,810 0 0	32·95	27·04
	II.	24,192 12 0	25,070 0 0	22,304 13 0	8·46	12·40
	III.	24,061 12 6	26,240 0 0	25,569 0 0	6·26	5·0
		79,911 10 6	82,160 0 0	71,683 13 0	11·47	14·61
Bhákharheri ...	I.	33,075 12 0	32,200 0 0	23,524 0 0	40·60	36·83
	II.	33,801 3 9	34,521 0 0	26,152 0 0	29·25	32·0
	III.	7,315 3 6	7,590 0 0	6,270 0 0	16·66	21·05
		74,192 4 3	74,311 0 0	55,946 0 0	32·61	32·64
Jauli Jánsath ...	I.	18,445 8 0	16,500 0 0	11,210 0 0	64·54	47·19
	II.	62,879 2 6	55,400 0 0	39,838 0 0	57·83	39·07
	III.	9,524 2 4	9,210 0 0	7,447 0 0	27·89	23·67
		90,848 13 0	81,110 0 0	58,495 0 0	55·30	38·66
Khátauli ...	I.	38,630 6 0	34,291 9 0	23,660 2 6	63·27	44·90
	II.	40,785 6 0	38,000 0 0	28,487 0 0	41·17	31·55
	III.	16,832 14 0	15,815 0 0	13,282 0 0	26·72	19·70
		96,248 10 0	88,106 0 0	65,829 2 6	46·20	33·84
Bhúmab Sambalherah.	I.	20,025 4 6	19,050 0 0	14,975 0 0	33·70	27·31
	II.	18,875 7 6	17,846 0 0	12,396 0 0	40·90	33·31
	III.	8,723 2 9	8,960 0 0	7,320 0 0	22·44	32·40
		47,622 14 9	45,856 0 0	35,691 0 0	33·42	28·45
Total of six parganas, ...		454,712 4 9	4,41,093 0 0	3,46,908 15 6	31·08	27·15

Reasons for difference
discussed.

11. The assessments of Khátauli and Jánsath would seem to involve the admission that the rates assumed for the first settled parganas were too high ; but it is quite possible that rates may be theoretically justifiable, and that they may be levied in precisely similar villages, and yet that the enhancement which they involve is so enormous that it may not be desirable to impose it all at once in a tract in which for thirty years rents had ruled abnormally low. And it is an additional evil of inadequate assessments for a long term of years, that even when the period comes to an end, there are difficulties in the way of securing to the State the whole of the additional revenue of which it has so long been deprived. For any sacrifice of revenue which has been made in these two parganas I am the more distinctly responsible that, with reference to pargana Jánsath, my proposals were objected to as being too moderate. But the enhancement taken was so great that I could not with safety have taken more ; and disproportionate as my assessments are to those indicated by the assumed rates, they are still so high that I feel more anxious regarding the success of the new settlement in these two parganas than with reference to the remainder of the tract.

In addition to the assumed rates, the circle rates on cultivation and on assessable land were used for purposes of comparison, and in average villages were frequently of considerable use ; but variations from the average, whether in the proportion of irrigated land or in the area of sand, rendered all calculations by average rates advantageous, more because they called attention to extreme variations than because they could be trusted as guides in assessment.

Aids to assessment.

12. But in addition to these calculations I had before me at assessment all the various information contained in the pargana books, the comparative area statement of the old, recent, and new settlements, the records of soils and crops and of former assessments, an abstract of canal irrigation statistics for the three years previous to 1868-69 for the year of drought and for the subsequent year of measurement. There were also statistics of population, of the number of wells, sugar-mills, ploughs, and cattle, and statements showing the classes which occupied the land, the rates which they paid formerly and at the present day, and the rent-rolls of the villages as recorded for twelve years by the village patwári. And the calculations had already involved a certain amount of consideration, for until the villages were arranged in circles no calculations were possible.

Distribution.

13. The distribution of the assessment was in many cases quite as difficult a matter as the fixation of the demand for the whole estate. Ordinarily the division of the land among the various pattis was fair ; but canal irrigation had necessarily caused inequalities, by enormously improving without any corresponding expenditure on the part of the zemindars certain portions of an estate, and in many cases by injuring the lower lands which had formerly been so valuable. Where deterioration was likely to be permanent it was right that full consideration should be given to the altered condition of the village ; but where the change in the relative value of portions of an estate was due to irrigation, and there was still land capable of irrigation left, it was generally agreed that distribution on the present soil areas alone was undesirable, and the people readily assented to a compromise. A mean between the jama by soil rates and that by the malguzári rate was the compromise ordinarily agreed to, but the cultivated rate and the proportion of the old jama to the new for the whole estate were frequently brought in to prevent exclusive attention being paid to existing circumstances, or to moderate the suddenness of enhancement in particular pattis.

In effecting these arrangements little help could be obtained from the people themselves ; wherever there was any serious difficulty, the weaker or the more distressed party insisted on an order by the assessing officer or by the Deputy Collector, and the most important cases were decided only after renewed inspection and prolonged investigation. All this took time, but the work was one of primary importance, and where the Government demand had been seriously enhanced, it was all the more necessary that the revenue should be fairly distributed. In some cases the difficulty of

equitable distribution had been increased if not entirely caused by unfair partitions, and some partitions were so palpably bad as to be almost necessarily fraudulent; but on the whole recent partitions stood the test well, and there is no more searching test of their fairness, than the contested distribution of a new revenue demand based on new, and it may be hoped corrected, soil entries.

14. The appended statement shows the method in which the demand was finally distributed.

Statement showing method of distribution.

Statement showing modes of distribution of jamas in the six parganas of the Muzaffarnagar district the settlement of which has been revised.

How distributed.	Pur Chapr.	Muzaffarnagar.	Bhikarheri.	Jansath.	Khatauli.	Phémah Sambhalicrah.	Total.
1. By biswa shares ...	11	26	18	18	24	12	109
2. By shares (dheris) ...	...	...	...	...	1	...	1
3. Upon number of ploughs ...	1	...	...	...	...	...	1
4. By average rate on total area ...	6	...	2	2	1	2	13
5. By average rate on assessable area ...	11	9	5	7	13	...	45
6. By average rate on cultivation ...	...	5	...	...	8	...	13
7. By soil rates ...	12	7	4	15	13	9	60
8. By fixing lump sums on each patti or thok with reference to soil and areas.	1	2	4	...	2	1	10
9. By average between soil rates and average rate on assessable area.	5	6	...	2	1	3	17
10. Enhancement proportionately distributed ...	...	1	2	6	3	1	13
11. By fixing lump sums on each mahalla by consent of proprietors.	...	...	...	...	...	1	1
Total ...	47	56	35	50	66	29	283
12. Zemindari villages or the like owned by one individual or more than one, but of the same family, in which jama had not to be distributed.	12	17	19	21	38	30	137
Total ...	59	73	54	71	104	59	420

It will be seen that in 109 estates the demand was distributed by biswa shares, in one by other shares, in one on ploughs; so that in two-fifths of the total number of estates in which distribution was required the possession was allowed to be in just proportion to the nominal share.

In 71 cases in which it was necessary to look to the area in possession the people were satisfied with average rates of incidence calculated on the total assessable or cultivated area; in 70 the demand was distributed with reference to the soils of the assessable or of the cultivated area; while in the remaining 31 the demand was distributed by agreement, by striking the average between the demand by the rate on the assessable area and that by soil rates, or with more or less reference to the former demand.

In some cases the rate on the assessable area was brought in to modify the demand based upon soil areas which were liable to change, but proportionate enhancement was in most, if not in all, cases simply a device to moderate what would otherwise have been extreme changes. It is no doubt illogical to be partly guided by a previous distribution which has been rejected as unfair, but in distribution as in assessment it is sometimes necessary to stop short of logical conclusions and to rest satisfied with an arrangement somewhat different from that which abstract justice demands.

In not a few instances it was found that great relief and a substantial instalment of justice could be given with the full approval of all parties, while the complete

rectification of old inequalities would have plunged villages in discord. In such cases a discretion was exercised, and just as in certain villages previously too lightly assessed it is not always possible to enhance the demand so as to secure the full claims of the State, so in estates in which the demand has long been very unequally distributed it may be inexpedient to restore too suddenly the balance which has long been lost.

Such cases were not very numerous ; in all of them the old inequalities were largely redressed, and I trust that at next settlement there may be no necessity for the adoption of illogical methods of distribution, which can be justified only by practical considerations, the full weight of which is hardly appreciated until the circumstances of individual villages are examined.

That the distribution of the demand was fairly successful may be assumed from the absence of appeals, for while there were five appeals against assessments, all of which were dismissed, there were only two objections with reference to distribution ; of these one referred to a mistake by which a graveyard had been included in the assessable area, while the other also had reference to an error which had been overlooked, so that neither involved the principle of distribution which had been adopted.

Revenue instalments.

15. Every endeavour was made, by studying the convenience of the people in the fixation of the instalments of revenue, to render the heavy enhancement as little irksome as possible. The statement given below shows the instalments fixed by Mr. Martin, and the alterations made with the full concurrence of the people.

Kharif instalments.

The abolition of the 15th November instalment was cordially welcomed, for although more especially in rice villages it was possible to pay a considerable amount of revenue from the season's crop, it was clearly inconvenient to do so at a time when the agricultural community has to incur a heavy expenditure for the rabi sowings, and it was moreover desirable that at such a busy time of the year the collection of the revenue should not be allowed to interfere with agricultural operations. Half, therefore, of the total kharif instalment was postponed to the 15th December and half to the 15th February. The uniformity of the arrangements proposed, and the unanimity of the people with respect to them, was neither desired nor expected, and I did not at first feel certain that the instalments which the people asked for were altogether expedient ; but I had been convinced, by investigation with reference to villages which did not come under revision of settlement, that in prosperous estates facility of account is looked upon as a consideration of equal importance to any other : and when the people were almost unanimous, I thought it needless to interfere. Similarly, I permitted the fixation of the February instalment even where the cane crop was a small one. The people wished it, and the crop was likely, even in the poorest villages, gradually to extend its area : and in one way it gives an obvious advantage to the poorer landlords and cultivators, that when the rain crop fails and revenue is not suspended, less interest has to be paid on a loan taken in February than on one negotiated in December. It is unquestionable that the February instalment, as a whole, is out of all proportion small when compared with the value of the cane crop of the district ; but when new cattle are required, the want is most urgently felt at the cane-pressing, cane-sowing season, and can be most conveniently supplied at this time.

Another argument for not reducing still further the earlier kharif instalment and increasing that to be paid from the cane crop, even if this could have been done without inconvenience to Government, was consideration for the poorer landlords, to whom the postponement of all important income from their land until February would have been a serious blow. It is, however, likely that as time goes on it will be practicable to reduce the December instalment ; but in the meantime any further change in this direction was asked for only in one village, the Jât cultivators of which applied for the abolition of the old November and December instalments, and the collection of half the demand from the cane crop and of the remaining half from the spring harvest.

The instalments to be paid from the rabi crops have been raised in a greater ratio than the revenue, in order to make up for the lessened proportion of the kharif instalments, but the amount has been restricted to half the revenue.

Rabi instalments.

I do not look upon these arrangements as final ; the proportion of the area under spring crops does not appear likely to increase, but as there is no season of the year when a cultivator's receipts are so large and his immediate expenditure is so small, it may be found advisable to increase still farther the amount of revenue paid in summer, and to reduce, and in some cases to abolish, the autumn instalment that has been left. For the present, however, as great changes have been made, as the people desired, and in respect to instalments, as to other matters, I have allowed practical considerations to moderate the advance towards theoretical perfection. And it is hoped that the chief points to be studied in the fixation of revenue instalments have been sufficiently kept in view. These are—

Chief points studied.

- (1) That the instalments should be fixed so that the crop may be harvested before the tenant has to pay his rent.
- (2) That the instalments may be easily payable from the crops which are harvested about the time when the instalment falls due.
- (3) That the instalments should be fixed so as not to take too much from the cultivator at a time of great agricultural expenditure.

Comparative Statement of Revenue Instalments.

Pagana.	RAUL.				KHARTY.				Grand total.	Remarks.
	15th November.		15th December.		15th February.		Total.			
	a. a. p.	Rs. a. p.	a. a. p.	Rs. a. p.	a. a. p.	Rs. a. p.	a. a. p.	Rs. a. p.		
	129 0 0	14,540 14 3	3,620 5 0	17,887 8 0	34,775 0 0	17,887 8 0	14,808 7 6	29,673 12 9	59,264 0 0	
	...	36,269 14 3	...	...	...	...	...	...	...
	...	17,987 8 0	17,887 8 0	34,775 0 0	40,012 2 2	17,887 8 0	17,836 12 0	34,775 0 0	69,550 0 0	
	348 3 0	14,467 4 9	13,598 10 5	40,012 2 2	17,834 12 0	17,834 12 0	13,836 14 10	31,671 10 10	71,983 13 0	
	...	26,413 7 9	...	...	...	...	...	...	...
	...	20,540 0 0	20,540 0 0	41,080 0 0	20,540 0 0	20,540 0 0	13,498 2 0	41,080 0 0	82,160 0 0	
	140 0 0	12,537 5 0	9,887 4 0	26,554 9 0	12,537 5 0	12,537 5 0	12,498 2 0	27,391 7 0	55,946 0 0	
	...	18,667 5 0	...	...	...	...	...	...	...
	...	16,577 12 0	16,577 12 0	37,155 8 0	16,577 12 0	16,577 12 0	14,498 12 0	37,155 8 0	74,311 0 0	
	331 0 0	14,538 4 0	13,943 4 0	29,482 8 0	14,538 4 0	14,538 4 0	15,981 2 0	29,092 8 0	58,485 0 0	
	...	15,469 4 0	...	...	...	...	...	...	...
	...	20,377 8 0	20,377 8 0	40,755 0 0	20,377 8 0	20,377 8 0	15,449 2 0	40,755 0 0	81,110 0 0	
	352 8 0	14,679 0 0	10,907 6 6	26,499 14 6	15,981 2 0	15,981 2 0	32,026 8 0	31,390 4 0	67,829 2 6	
	...	24,431 8 0	...	...	...	...	...	...	...
	...	22,026 8 0	22,026 8 0	44,053 0 0	22,026 8 0	22,026 8 0	8,902 4 0	44,053 0 0	88,106 0 0	
	148 0 0	8,938 0 0	1,560 8 0	17,346 2 0	8,942 4 0	8,942 4 0	11,464 0 0	17,346 2 0	35,681 0 0	
	...	16,286 0 0	...	...	...	...	...	...	...
	...	11,464 0 0	11,464 0 0	22,928 0 0	11,464 0 0	11,464 0 0	29,988 11 4	22,928 0 0	45,856 0 0	
	46 11 0	60,380 12 0	60,377 5 11	1,19,004 12 11	60,377 5 11	60,377 5 11	2,10,372 4 0	1,69,004 2 7	2,44,308 15 6	
	27 7 0	...	...	...	...	...	...	...	...
	1,10,372 4 0	...	1,10,372 4 0	2,20,744 8 0	1,10,372 4 0	1,10,372 4 0	2,10,372 4 0	2,20,744 8 0	4,41,488 0 0	

16. The financial results of the revised assessments are as follows :—

Financial results.

Number.	Pargana.	Circle.	Mr. Martin's assessments.	Enhancements.	Reductions.	Net enhancement.	Percentage of enhancement.	Number of estates in which enhancement.	Number of estates in which reduction.	Number of estates in which neither enhancement nor reduction.	
			Rs.	Rs.	Rs.	Rs.	Rs.	Rs.			
1	Pār Chapār ... {	I.	27,800	3,100	...	3,100	11	7	...	1	
		II.	24,514	5,646	...	5,646	23	26	...	...
		III.	6,950	1,710	170	1,540	22	16	4	1	
		Total ...	59,264	10,456	170	10,286	17	51	4	2	
2	Muzaffarnagar ... {	I.	23,810	6,440	...	6,440	27	15	...	1	
		II.	22,305	3,325	560	2,765	12	13	4	4	
		III.	25,569	2,813	1,542	1,271	4	16	11	3	
		Total ...	71,684	12,578	2,102	10,476	14	44	15	8	
3	Bāhkarheri ... {	I.	23,524	8,676	...	8,676	37	12	...	...
		II.	26,152	8,610	241	8,369	32	26	2	1	
		III.	6,270	1,370	50	1,320	21	11	1	1	
		Total ...	55,946	18,656	291	13,365	33	49	3	2	
4	Jauli Jānath ... {	I.	11,210	5,290	...	5,290	47	10	...	...
		II.	29,828	15,562	...	15,562	39	45	...	1	
		III.	7,447	1,775	12	1,763	24	10	1	4	
		Total ...	58,495	22,627	12	22,615	38	65	1	5	
5	Khātan ... {	I.	23,660	10,631	...	10,631	44	22	...	1	
		II.	28,887	9,113	...	9,113	31	46	...	...
		III.	13,282	2,828	295	2,533	19	21	5	2	
		Total ...	65,829	22,572	295	22,277	33	89	5	3	
6	Bhūmah Sambalhe- rah ... {	I.	14,975	4,075	...	4,075	27	17	...	...
		II.	13,396	4,465	15	4,450	33	26	2	...	
		III.	7,320	1,640	...	1,640	22	13	...	1	
		Total ...	35,691	10,180	15	10,165	28	56	2	1	
Total of six parganas,			...	3,46,909	97,069	2,885	94,184	27	354	30	21

Although the equalization of the demand has been kept in view and reductions have been given in 30 estates, enhancements have been large and general and the increase in the demand is a very heavy one of Rs. 94,184, or 27 per cent. over the demand of Mr. Martin's settlement, and of Rs. 1,18,695, or 36 per cent. over that of Mr. Thornton. But this increase, heavy as it is, is justified by the change in the circumstances of the tract which has taken place since 1841, and which have been described so fully in this report.

Progressive assessments which were prohibited when settlement work began, but were again allowed towards its close, were fixed in only two estates of Pūr Chapār and in one of Bhūkarheri, in which enhancement was considerable. In this way the

ultimate demand was not reached until 1876-77, and in the intervening years the loss to Government was as follows :—

				<i>Pār Chapār.</i>			<i>Bhūkarheri.</i>			<i>Total.</i>			
				Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	
1873-74	386	4	0	925	0	0	1,311	4	0
1874-75	232	8	0	462	8	0	695	0	0
1875-76	78	12	0	78	12	0
				<hr/>			<hr/>			<hr/>			
				697 8 0			1,387 8 0			2,085 0 0			
				<hr/>			<hr/>			<hr/>			

With these exceptions, the new demand was collected from the following dates :—

Jauli Jānsath	...	...	...	...	...	...	1872-73
Khātauli	...	...	...	...	...	...	1872-73
Muzaffarnagar	...	...	...	...	...	...	1873-74
Bhūmah Sambalherah	...	...	...	...	...	...	1873-74

Working of the revised
assessments.

17. The impression which a new settlement makes upon the people, and through them upon the officials who are responsible for the collection of the new demand, depends a good deal upon the seasons which accompany the change : and in this respect the new settlement has been only moderately fortunate. The year 1872-73, during which the enhanced demand in Khātauli and Jānsath was for the first time collected, was generally unfavourable. In 1873-74 this tract seems to have fared better than other portions of the district and the division, in which the rice is described as having suffered, cotton being poor and the sugarcane crop very moderate ; but still the year was only a middling one, even when a good rabi is taken into account. Prices, however, ruled high, and sugar was largely exported to the Panjāb. Next year the crops were again only middling and prices were not above the average. In 1875-76 the rice crop on this side of the district was a fine one ; the rabi also was fair, and prices being low, much grain which was soon to be in great demand was stored, but the subsequent profits did not affect the great bulk of the agricultural population.

The kharif of 1876-77 was a good one, but there was excessive rain in the cold weather, and the benefit derived by high light soils did not compensate for the injury done to the crops in the level country irrigated by the canal. The harvest prices were not above the average, and the subsequent rise, owing to the rapid export eastwards, came too late to benefit the bulk of the agricultural population. The famine in Southern India, and the great impulse to the grain trade given by it, proved of great service to the town of Muzaffarnagar, which has now obtained a position in the grain trade which it is not likely to lose. Traders from various marts at a distance from the railway have settled in the town, and Muzaffarnagar began to thrive on the decay of the other markets. The new railway into Rajputana had opened up a new market for the produce of the district, and one which bids fair to be of great value to a sugar and rice-producing country.

The season of 1877-78 was preceded, as it was accompanied, by calamities. The heavy rain in the early summer had injured the straw on the threshing-floors before it could be protected, and many cattle died from being fed on rotting fodder, which was all that the drought left for them. The drought restricted production to irrigated lands, but the loss involved was to some extent made up for by the prices obtained for the cane crop which survived the drought and the unusual demand for fodder. Sugar sold at Rs. 6-12-0 per maund and gur at Rs. 5-10-0, and in fairly irrigated villages these prices went far to make up for the loss on the dry lands ; but still the year was one of hardship, and the rabi, though sown over a large area and sold at famine prices, hardly restored the balance of the year. Gram was very extensively sown after kharif, but the crop was much injured by excessive rain ; the wheat crop was fortunately a fair one.

New demand easily collected.

18. Under these varying and not altogether favourable circumstances the revenue has been collected without difficulty and the great bulk of the rent has been collected within the year, and the balances do not appear to have increased

since the new rent-rolls were drawn up. As is usual in the first few years after enhanced assessments, there was a certain amount of friction between zemindars and cultivators; suits for arrears increased and notices of ejectment were numerous, but the latter are no indication of heavy assessments and rents, but on the contrary are prompted in a great measure by the value of the land and of all permanent rights connected with it. Influenced in some measure, perhaps, by the increase in the number of suits, Mr. Sladen, upon whom the collections during the first few years devolved, was "disposed to think that the jamas were rather severe," but subsequent correspondence indicates that a different impression now prevails in the district.

19. And if the verdict of the officers who have had to collect the new demand has been on the whole favourable to its moderation, still more decisive is the verdict of statistics. Those of the rent-rolls are as follows :—

Rent-rolls.

Pargana.	Assessment.	Year.	Rent-roll.	Collections	Arrears.
	Rs. a. p.		Rs. a. p.	Rs. a. p.	Rs. a. p.
Pār Chapār ...	69,163 12 0	1281 fasli ...	1,53,309 0 0	1,45,927 0 0	7,382 0 0
	69,317 8 0	1282 " ...	1,54,880 0 0	1,47,347 0 0	7,533 0 0
	69,471 4 0	1283 " ...	1,57,604 0 0	1,52,848 0 0	5,256 0 0
	69,550 0 0	1284 " ...			
Musaffarnagar ...	82,160 0 0	1281 " ...	1,66,108 0 0	1,55,907 0 0	10,201 0 0
		1282 " ...	1,65,551 0 0	1,53,975 0 0	11,576 0 0
		1283 " ...	1,63,806 0 0	1,53,819 0 0	9,987 0 0
Bhūkarheri ...	73,886 0 0	1281 " ...	1,57,053 0 0	1,49,753 0 0	7,300 0 0
	73,848 8 0	1282 " ...	1,54,191 0 0	1,43,623 0 0	10,568 0 0
	74,311 0 0	1283 " ...	1,56,324 0 0	1,44,788 0 0	11,436 0 0
Jauli Jānsath ...	81,110 0 0	1281 " ...	1,71,234 0 0	1,60,863 0 0	10,371 0 0
		1282 " ...	1,72,591 0 0	1,54,319 0 0	18,272 0 0
		1283 " ...	1,69,636 0 0	1,45,074 0 0	24,612 0 0
Khātāuli ...	88,106 0 0	1281 " ...	1,92,155 0 0	1,71,637 0 0	20,518 0 0
		1282 " ...	1,91,785 0 0	1,65,011 0 0	26,774 0 0
		1283 " ...	1,88,441 0 0	1,62,276 0 0	26,165 0 0
Bhāmah Sambalherah ...	45,856 0 0	1281 " ...	94,567 0 0	89,891 0 0	4,676 0 0
		1282 " ...	91,075 0 0	84,780 0 0	6,295 0 0
		1283 " ...	92,651 0 0	85,542 0 0	7,109 0 0
Total ...	4,39,781 12 0	1281 " ...	9,34,326 0 0	8,73,968 0 0	60,358 0 0
	4,40,398 0 0	1282 " ...	9,30,073 0 0	8,48,955 0 0	81,118 0 0
	4,41,014 4 0	1283 " ...	9,28,412 0 0	8,43,847 0 0	84,565 0 0
	4,41,093 0 0				

The rent-rolls for 1284 fasli have not been given, as in them all rental of sīr land has been omitted. This is, I think, to be regretted, and it is in my opinion desirable that ex-proprietary rates should be applied to all sīr cultivation. In this way not only will a fair rent-roll be obtained, but in the case of transfers the rent of the ex-proprietors will have been fixed beforehand. The evidence of the rent-rolls is on the whole in favour of the moderation of the assessments. The arrears are those of the year, and the greater part of them are no doubt eventually collected. They are largest in those parganas in which there are most Sayyid cultivators, and it is not much to be regretted if profits are occasionally restricted in those townships in which a few of the more powerful Sayyids have succeeded in depriving their weaker brethren of proprietary rights. But even in Jauli Jānsath the result is not unsatisfactory, for during three years of unfavourable seasons and moderate prices the collections recorded to have been made amount to 93 per cent. of the amount assumed by the assessments to be the proper rental.

20. But perhaps the best test of the moderation of an assessment is that given by the price of land. If the demand is oppressive, the price of land must be low; if, on the other hand, land fetches a high price not only in exceptional cases, but throughout a considerable extent of country and through a series of years, it may fairly be assumed that the assessment is not too heavy. The statistics of transfers are as follows :—

The evidence of transfers.

Parganah.	Fasil year.	PRIVATE SALE.				SALES BY ORDER OF COURT.				MORTGAGE.				TOTAL.			
		Area in bighas.	Jama.	Price.	Years to clear.	Area in bighas.	Jama.	Price.	Years to clear.	Area in bighas.	Jama.	Price.	Years to clear.	Area in bighas.	Jama.	Price.	Years to clear.
Púr Chapár...	1881	129 0	122 7 3	3,985 0 0	30	166 0	150 5 9	2,528 0 0	19	77 11	126 14 10	3,288 0 0	26	372 11	419 11 10	10,098 0 0	24
	1882	291 2	70 13 9	1,303 0 0	18	293 6	120 10 9	2,395 10 0	19	210 6	141 5 0	1,850 10 0	13	794 14	332 2 6	5,548 4 0	13
	1883	451 6	493 3 9	9,390 0 0	19	419 8	339 13 9	4,470 0 0	19	398 16	99 8 0	1,636 8 0	16	1,269 10	811 9 6	15,496 8 0	18
	1884	271 2	244 13 11	5,139 8 0	21	245 3	123 2 9	4,181 0 0	21	227 1	134 8 1	2,549 8 0	19	743 6	571 9 5	11,570 0 0	20
Total	...	1,142 10	940 5 8	19,816 8 0	21	1,123 17	703 1 6	13,571 10 0	19	913 14	502 4 7	9,324 10 0	18	3,180 1	2,145 11 3	43,012 12 0	20
Muzaffarnagar,	1881	510 8	584 4 10	12,921 10 0	22	398 6	198 0 0	2,479 0 0	17	611 18	838 0 4	18,074 2 0	21	1,480 12	1,620 5 3	34,474 12 0	21
	1882	183 5	187 13 7	3,956 0 0	21	40 3	105 0 0	2,166 0 3	20	161 19	336 8 0	6,335 0 0	19	385 7	639 5 7	12,456 0 3	20
	1883	586 6	524 15 3	10,951 12 10	21	55 13	65 8 3	1,325 0 0	20	376 6	272 10 3	7,638 0 0	20	1,018 4	943 1 9	12,814 12 10	20
	1884	874 3	821 6 10	17,309 6 0	21	130 19	154 3 1	2,668 4 0	17	363 19	553 4 8	9,953 0 0	16	1,374 1	1,528 15 4	22,920 4 0	20
Total	...	2,154 2	2,118 8 6	45,137 6 10	21	535 0	523 12 1	9,638 4 3	18	1,519 3	2,100 7 3	41,900 2 0	19	4,308 4	4,741 11 10	96,675 13 1	20
Bhúkarheri ...	1881	56 10	20 10 6	2,080 0 0	23	519 0	272 5 3	2,650 0 0	13	1,391 16	420 14 9	5,058 4 0	13	1,967 6	783 14 6	10,798 4 0	14
	1882	214 5	240 2 3	5,429 2 3	35	32 18	29 14 3	277 4 9	9	1,011 2	400 4 9	7,138 0 0	17	1,358 5	670 5 3	15,824 7 0	24
	1883	323 12	313 5 10	6,756 0 0	21	697 9	419 1 9	2,744 13 7	6	1,011 10	618 0 3	6,599 0 0	10	2,032 11	1,349 7 10	16,099 12 7	12
	1884	2,869 16	1,528 11 0	39,771 8 0	26	17 4	13 4 9	300 0 0	16	1,685 13	1,958 12 0	25,892 0 0	13	5,262 12	3,499 11 9	65,868 8 0	19
Total	...	3,954 3	3,171 13 7	57,086 10 3	26	1,366 11	733 10 0	6,372 2 4	9	5,300 1	3,397 15 9	44,577 4 0	13	10,520 16	6,308 2 4	1,03,585 15 7	17

Jauli Jannath...	1281	778	2	762	4	0	12,460	0	0	16	166	0	150	5	9	2,325	0	0	19	884	0	459	5	6	3,906	0	0	8	1,898	2	1,371	15	3	19,391	0	0	14
	1282	2,823	1	2,349	6	3	67,410	0	0	30	293	6	120	10	9	2,350	10	0	13	2,198	5	3	27,010	0	0	15	702	5	4,368	6	3	96,770	10	0	21		
	1283	1,195	8	893	11	4	14,635	0	6	16	277	6	311	4	4	4,630	0	0	14	52	12	72	13	1	1,130	0	0	15	1,825	6	1,277	12	9	20,395	0	6	16
	1284	1,842	11	2,867	8	0	58,500	0	0	22	84	16	63	2	3	800	0	0	13	181	18	147	13	0	2,475	0	0	15	2,059	5	2,878	7	3	61,575	0	0	21
Total ...	...	6,439	:	6,572	13	7	1,53,205	0	6	23	821	8	645	7	1	10,605	10	0	16	3,584	11	2,878	4	10	34,321	0	0	12	11,115	1	10,096	9	6	1,98,131	10	6	19
Khatauli ...	1281	2,341	12	1,800	3	3	21,834	0	0	13	921	14	707	10	3	7,478	10	8	10	846	7	615	0	0	7,160	0	0	11	4,009	13	3,192	13	6	36,462	10	8	11
	1282	414	14	632	12	7	18,454	7	6	29	65	19	53	11	9	750	0	0	14	301	19	851	5	6	13,524	0	0	16	782	12	1,537	13	10	32,708	7	6	21
	1283	508	8	566	14	5	15,009	4	0	26	5	4	4	11	6	50	0	0	12	412	11	380	2	9	8,68	4	0	21	9 6	5	951	19	8	23,141	4	0	24
	1284	412	0	546	4	1	16,301	6	5	28	733	6	733	6	5	8,483	12	0	11	66	12	331	14	6	4,396	4	0	13	1,311	18	1,601	9	0	24,181	6	5	17
Total ...	...	3,576	14	3,546	2	4	70,589	1	11	20	1,726	3	1,499	7	11	16,762	6	8	11	1,437	9	2,168	6	9	38,62	4	0	15	6,930	6	7,214	1	0	1,20,513	12	7	16
Bhūmah Sam- balherah.	1281	568	1	279	9	6	3,520	0	0	12	776	17	34	4	0	436	0	0	12	752	15	443	6	5	6,090	0	0	13	2,097	13	757	3	11	0,046	0	0	13
	1282	2,656	9	628	3	11	14,727	0	0	23	445	7	100	7	5	1,235	0	0	13	233	13	248	12	10	2,450	0	0	13	3,434	9	97	8	2	19,412	0	0	19
	1283	617	10	197	15	4	2,880	0	0	14	567	17	271	3	3	3,130	11	1	8	290	12	213	13	6	1,950	0	0	9	1,475	19	783	0	1	7,960	11	1	10
	1284	898	5	1,063	3	6	30,339	2	8	28	2,306	6	959	9	9	5,900	0	0	6	533	6	328	5	1	3,908	0	0	11	4,27	17	2,341	2	4	40,047	2	8	17
Total ...	...	4,740	5	2,159	0	3	51,366	2	8	23	4,096	7	1,455	8	5	10,701	11	1	7	2,199	6	1,234	5	10	15,393	0	0	12	11,035	18	4,858	14	6	77,465	13	9	16
Grand Total...	1281	4,283	13	3,649	7	4	56,990	10	0	16	2,857	17	1,513	15	0	20,698	10	8	13	4,564	7	2,903	9	10	43,576	6	0	15	11,705	17	8,066	0	2	1,21,260	10	8	15
	1282	6,582	16	4,009	3	4	1,14,77	9	9	28	1,170	19	530	6	11	9,174	9	0	14	4,504	4	4,176	9	4	59,297	10	0	14	12,357	15	8,716	3	7	1,82,749	12	9	21
	1283	3,652	10	2,988	1	11	59,622	1	4	20	2,028	16	1,411	10	10	16,350	7	8	11	3,543	7	1,756	15	10	36,936	8	0	15	8,237	18	6,166	12	7	1,02,908	1	0	17
	1284	7,657	17	6,861	15	4	1,66,260	9	1	34	3,517	14	2,114	13	9	22,333	0	0	10	3,503	9	3,444	10	0	48,973	12	0	14	14,679	0	2,431	7	1	2,37,467	5	1	19
Total ...	...	22,206	16	17,508	11	11	3,97,150	14	2	23	9,469	6	5,569	14	6	68,451	11	4	12	15,214	3	12,381	18	6	1,75,783	4	0	14	46,990	5	35,360	7	6	6,44,385	13	6	18

Ratio of price to assessment.

21. For convenience of comparison the number of years' purchase is excerpted:—

Pargana.	Fasli year.	Private sales.	Sales by order of court.	Mortgage.
		Years.	Years	Years.
Pūr Chapār ...	1281	30	19	26
	1282	18	19	13
	1283	19	18	16
	1284	21	21	19
	Average ...	21	19	16
Muzaffarnagar ...	1281	22	17	21
	1282	21	20	19
	1283	21	20	20
	1284	21	17	18
	Average ...	21	18	19
Bhūkarheri ...	1281	23	13	12
	1282	35	9	17
	1283	21	6	10
	1284	26	16	13
	Average ...	26	9	16
Jauli Jānsath ...	1281	16	19	8
	1282	30	19	12
	1283	16	14	15
	1284	22	12	15
	Average ...	23	16	12
Khātanli ...	1281	12	10	11
	1282	29	14	16
	1283	26	12	21
	1284	28	11	18
	Average ...	20	11	16
Bhūmah Sambalherah ...	1281	12	12	13
	1282	23	12	13
	1283	14	8	9
	1284	28	6	11
	Average ...	23	7	12
Grand Total ...	1281	16	13	16
	1282	38	17	14
	1283	20	11	16
	1284	24	10	14

The area transferred during the four years following the commencement of the term of the new settlement has amounted to 6 per cent. of the total area of the tract, but the prices obtained preclude the view that the transfers can have been caused by the incidence of the demand. The variations in price are very considerable, but when the areas transferred in each pargana are small, such differences are easily caused by the transfer one year of a sandy tract and the next of highly irrigated land; competition, too, has an important effect in prices, and the very high prices of land obtained in some parganas, more especially in 1874-5, are owing to the wish of more than one wealthy person to possess the same land.

The average rate of mortgage follows generally at a suitable interval that obtained at private sale, but the prices obtained at public sales still lag decidedly behind all others. There is no reason to suppose that the shares which are sold by the order of the courts are in any degree inferior to those which are sold privately, and yet the price of land sold publicly is almost invariably lower, not merely slightly, but to an excessive degree, than in the case of land sold by private bargain. Some allowance must of course be made on account of the more hurried and forced nature of the transaction in the case of sales by order of the courts, but the difference between 22 and 12 years' purchase is, in my opinion, far too great to be satisfactorily accounted for by any suppositions which exclude the want of sufficient notice or of sufficient care in the conduct of sales. The difference, it is true, between the prices obtained at public and at private sales is general throughout the North-West Provinces, but this seems only to prove that something is wrong in the system on which sales are conducted, and that improvements are urgently required.

22. There is certainly no department of our administration regarding which more bitter complaints are made, and no one can make frequent inquiries as a settlement officer has to do into the circumstances of transfers without hearing frequent insinuations as to the insufficiency of the notice which is given of when land is to be sold and the irregularities alleged to exist in the conduct of sales. The improvements that seem to be required are :—

Sales by auction.

1st.—Greater care in advertizing sales. The civil courts retain in their own hands the issue of notices ; but it would be easy for collectors to supplement these notices through the tahsil officials by additional notices, not only in the village in which the land to be sold is situated, but in adjoining townships.

2nd.—Greater care in the conduct of sales. Not only impartiality on the part of the officer conducting sales, but the strictest supervision of subordinates is required. There is nothing more easy than to mislead and hustle ignorant villagers, the absence of whose competition leaves the property to be sold at the disposal of the judgment-creditor.

The people of this country are not sufficiently instructed to be able in these matters to look after their own interests ; they should be protected as far as may be from injustice and oppression. We are always ready to charge the money-lending class with fraud and oppression ; it is curious that we should so often practically assume that fraud ends when a decree is obtained.

23. But even when sales by order of the courts are included, the average price of land during four years is 18 years' purchase of the Government demand and 23 years' purchase of the assumed profits ; such prices furnish strong evidence of the moderation of a settlement, and could hardly be obtained if the assessments were unduly severe. The contrary criticism, which is apparently more plausible, that the prices of land show the assessments to be unduly light, must be parried by the reflection that a heavy enhancement has been taken, and that it is notoriously difficult to increase the land revenue more rapidly without imperilling the prosperity of the country and causing the greatest hardship to the people.

Average price of land.

But the circumstances that the present demand is in many cases light, that irrigation is still extending, and that prosperity is likely to continue, furnish sufficient reason, even if this were not already determined on other grounds, for restricting the period of settlement to twenty years.

24. Very considerable as has been the progress of this portion of the district which may be attributed to the almost uninterrupted security of life and property for thirty years, to the steady if slow increase in the population, to the improvements in communications which have rendered distant markets accessible, it is unquestionable that the exceptional advance which has marked the last twenty years is entirely owing to the Ganges Canal. This noble work, in itself a line of communication, destined no doubt to be far more important in this respect than it has been, has attracted population from without to the tract which it secures, and has in this way contributed to the list of causes of a gradual advance. But it has done far more : it has secured the tract as a whole, and almost every village within its limits from periodical scarcity, so that agricultural advance is no longer interrupted at intervals by calamities which leave their impression many years after the seasons of drought themselves ; it has brought easy irrigation with a minimum expenditure of labour to dry villages which previously had no irrigation, it has perfected without involving any increased demand for labour the irrigation of those villages which were imperfectly watered, and it has in previously fairly irrigated tracts economised labour to such an extent that in such neighbourhoods agricultural progress has been no less striking—indeed, it has been even more marked than in those tracts which have been enabled to use water for irrigation for the first time.

Exceptional progress of recent years due to Ganges Canal.

Errors in distribution.

25. If the officers who had to distribute the water of the Ganges Canal had had the benefit of experience similar to that which the history of the canal has since furnished, and had they been able to disregard a natural but unfortunate anxiety for immediate palpable results, or had they been able to conduct the revenue administration of the canal, without reference to the land revenue administration, and this might have enabled them to show fair results without sacrificing to them the interests of the country at large, there can be little question that the distribution of water would have been effected in a very different manner from what has been the case. In the anxiety to make canal water promptly available, and to secure an immediate revenue, distributaries were no doubt constructed with undue haste and without sufficient care; but independently of such mistakes in construction which were under the circumstances almost inevitable, and which have to a great extent since been remedied, there were serious mistakes in the system of distribution which were almost unquestionably owing to the unfortunate anxiety for palpable results.

Difficulties of canal officers.

26. And it must be allowed that the revenue administration of the Ganges Canal was placed in a most unhappy predicament. Water-rates were fixed in a haphazard manner, and were discovered when settlement operations were instituted to have been all along unduly low. The fact that the advantage of irrigation was afforded at a price much lower than the irrigation was worth naturally had its effect on rents; where these were levied in kind and by crop rates, the proprietor received from the cultivator his old share of an increased produce, and high rates for the better crops grown in an increased area. Where rents were taken in money, the tenant was more gradually but not less surely made to pay enhanced rates, or when the landlord's influence or power was overwhelming, he was made to pay in kind and by crop rates instead of unvarying money rents.

It is obvious that the officers of a department expected to show immediate pecuniary results, but without liberty to take a full price for the irrigation-advantages at their disposal, were in a measure forced to distribute the water of the canal in the method which would necessitate the least initial expenditure, and would secure the largest irrigation of the most valuable crops. The poor and arid tracts were in this way rather avoided than studied in the Ganges Canal tract, as well as in the country watered by the Eastern Jumna Canal; and although the canal could hardly avoid watering the dry neighbourhoods through which it ran, dry tracts at a short distance were neglected, while water was being poured into villages sufficiently if not fully protected by wells.

Consequences of mistake made.

27. The consequence of such a shortsighted method of distribution was that not only was the country at large less benefited than might have been the case, but the revenue of the canal was eventually distinctly less, and very seriously less constant than it might have been under a better system of distribution. For when water is poured without stint over a limited area, it is impossible that the whole of the water should be utilized every year; as a matter of fact it is not fully utilized one year in ten, and cannot possibly with the present population and with the present appliances of agriculture be in ordinary years fully taken advantage of. The true policy of canal distribution would have been to have extended the advantages of canal irrigation as widely as possible, and to have treated with special consideration those tracts which were the driest and the poorest, which most needed extended irrigation in ordinary seasons, and were most liable to injury in years of drought. Such a policy would have at once protected the greater portion of a district like Muzaffarnagar; it would have enabled a larger population to grow the best crops with a full prospect of success; by devoting canal water to the best land of many villages, it would have rendered it possible to levy full rates in a shorter time, and, above all, it would have rendered the demand for canal water much more constant than it can be, until the system which was originally adopted shall be gradually abandoned and more extended distribution shall be effected. The system of which I speak does not appear to have been peculiar

to this part of the Doab, for in a discussion regarding the influence of the canal on the Cawnpore district it was remarked that "the Engineers who first laid out the canal thought of little else but the fertile parts of the country, and as a consequence took it through those tracts which were already sufficiently irrigated by wells." This is probably a somewhat too sweeping statement, but it is generally acknowledged that the system of distribution which was adopted had for its object the prompt collection of water-rates for the largest possible area of the more valuable crops.

28. And for this result the land-revenue administration is as distinctly responsible as that of the canal; for many years even so late as 1867 it was insisted that canal irrigation had little or no influence upon the revenue, and the Irrigation Department was prevented from looking to indirect revenue as a justification for a system which would have necessitated a larger initial expenditure on distributaries, and a greater annual expenditure on distribution, the full advantage of which would only have been apparent after the lapse of years. There are many portions of the district in which it is easily conceivable that the Engineer may have paused to consider whether the water-supply at his disposal was to be taken through a poor dry tract, with no rice and little sugarcane, or into a fertile depression fairly irrigated by wells and with much of the land under the best crops. In the one case the distributary might have provided for limited portions of many poor estates; progress would have been slow. There was no labour available for the rapid extension of higher cultivation, and although it might be hoped that, working with better heart and gradually increasing resources, the inhabitants of the poor tract might eventually be able to utilize every year the whole of the supply, this was at the best doubtful, and the prospect was at any rate distant. In the limited tract, on the other hand, the rice-fields were there already, and the extensive sugarcane crop, testifying as it did to the goodness of the soil and the industry of its occupants, formed a temptation too great to be resisted. And if even long after the first opening of the canal other considerations, such as the good of the country at large, the influence on the land revenue, had been entertained, the first would hardly have prevailed against departmental necessities, and the second could not be expected to have much weight when the revenue authorities depreciated both in theory and in practice the effect of canal irrigation upon the land revenue. The consequence generally was that canal distributaries were run out at stated intervals, and where any preference was shown, it was shown to the more fertile neighbourhoods which least required any new means of irrigation; and while the more distant tracts, although within ten miles of the main canal, were left almost or entirely as they were, the still more accessible villages were deluged with a quantity of water which they could fully utilize only in seasons of extreme drought, and which in ordinary years was for the greater part allowed to flow past unused. Gradually and notably within the last few years better counsels have prevailed, the extension of irrigation to outlying villages and tracts proceeds year by year, and it may with confidence be hoped that irrigation from the canal may gradually, owing to extended distribution, become more constant, and that the proportion of water expended on the better crops may become greater.

Land revenue administration partly responsible.

29. The irrigation statistics of the Ganges Canal tract in Muzaffarnagar show that the irrigation of the kharif crops is fairly constant, while there is available in the cold weather water for double and treble the area which is ordinarily irrigated, and both in the kharif and rabi the area of constant irrigation may be approximately ascertained.

Water-supply not always utilized.

AREA IRRIGATED IN ACRES.				
	1867-68.	1868-69.	1869-70.	1870-71.
Kharif	35,367	36,253	41,042	31,519
Rabi	25,348	21,590	36,983	44,269

Sugarcane in canal-irrigated estates is always watered when water is available, as is múnji or the finer rice; while in the rabi the wheat which is irrigated year after year is that which is grown on the best and most carefully cultivated soil. If the water-supply were restricted in each village to what is required for cane and the finer rice, the full supply would be always utilized; and if a similar statement cannot be so confidently made regarding the rabi irrigation, it is no less certain that the more the supply is distributed, the larger will be the proportion of the constant irrigation to the maximum irrigation. The enormous expansion of rabi irrigation in a year of drought shows that a supply is retained at the disposal of certain villages, two and three and often many more times as great as can be ordinarily made use of. Much of the land exceptionally irrigated in this way is so poor that it is never again irrigated until another season of drought and high prices come round, as nothing but famine prices enables it to pay the cost of irrigation. In this way, to irrigate an acre once in twenty years, a water-supply is maintained in excess of that which can be utilized. Year after year it runs to waste, and when it is taken advantage of, it does much less good when given to the unproductive outlying land of the over-irrigated village than it would have done not once, but many times, if taken to an estate elsewhere urgently in want of water. The maintenance, therefore, of a supply of water greater than can be ordinarily utilized is not only injurious to the interests of the State as canal owner, as depriving it of the receipt of water-rates, but is injurious to the country at large, as sacrificing a very considerable benefit to one, which is trifling.

Mistakes committed have not injured tract under report.

30. But the number of estates left unirrigated in the tract which is the subject of this report is not numerous, and has, since the settlement has been completed, and partly in accordance with my representations, been considerably lessened by the construction of a rájbaha which now irrigates the south-western portion of the pargana of Bhúmá Sambalherah. And as the wants of other parts of the district have been sacrificed to this tract, the benefits which might have been secured in this tract and have not been obtained are not so great as elsewhere. But the less skilfully water is distributed and the less fully it is utilized, the less effect the canal has on the productiveness of the land and on the land revenue. The income and profits of the canal are diminished and the country is injured by the loss of produce which might have been obtained by the failure to secure an income which might have been fairly earned, and last but not least by the increased difficulty involved by all these failures in making clear the full benefits which the canal has conferred upon the country, and in this way of rendering less likely the extension of similar benefits to other neighbourhoods. But all the errors in principle which have marked the history of canal administration have had the effect of temporarily at least enhancing the apparent benefits which this tract has derived from the canal. Needless liberality in the distribution of water has substituted irrigation with a minimum expenditure of labour for the old laborious method of raising water from wells, and has effected an economy of labour the amount and results of which have been already noticed. And if the advantage of having at its disposal an extraordinary supply of water in seasons of emergency is one which it is difficult for a settlement officer to consider in assessment, it is one the value of which is unquestionable to the tract which is benefited at the expense of the country at large.

Influence of low water-rates on rents.

31. When canal irrigation was first introduced, rents were ordinarily taken—

- (a.) by division of the crops;
- (b.) by appraisement and the calculation of the landlord's share;
- (c.) by crop rates;
- (d.) by money rents.

In the last case the landlord at first derived no advantage from irrigation except in the increased security of his rent, but when crop rates alone were customary he received higher rents when better crops were more largely grown. But crop rates

and kind rents generally went together, and at first the apparently equitable arrangement was generally adopted, that when a cultivator irrigated from the canal a crop of which his landlord got a share, the landlord should pay the same share of the water-rent that he received of the crop. Experience, however, showed that, even if he paid the whole rent, the cultivator gained largely by canal irrigation at the water-rates charged, and eventually it was found that the water-rates were so low that the cultivator could afford to pay not only the whole of the water-rent, but additional rent for the advantage he enjoyed of obtaining water for irrigation at a low price.

32. This difference between the rent for dry land and that which has come under canal irrigation constitutes the item which the advocates of assessment, irrespective of canal assets, would wish to see appropriated by the State through the Irrigation Department. At present the Irrigation Department charges a set of haphazard rates for the advantages of irrigation. These rates are so low that the rent of land irrigated is largely enhanced. Up to the date of revision of settlement the whole of this unearned difference is lost to the State, and even after revision of settlement only half of it is claimed. This addition to the land revenue due to the canal is the indirect revenue for which credit is given to the Ganges Canal.

Difference between rent of canal-irrigated and dry land.

33. This indirect revenue as estimated under the orders of the Board of Revenue at Rs. 1 per acre of increased irrigation amounts to a sum of Rs. 1,00,999 for the tract under report; but as the question is an important one, it is as well that the more detailed estimate based on the difference between wet and dry rates should be given as follows :—

Estimates of indirect revenue from canals.

Pargana.	Rent-roll calculated on soil areas independent of the canal.					Rent-roll calculated on areas of present revision.						Proposed Jama.	
	Area re- corded irrigated in 1841.	Assumed increase at 25 per cent.	Total.	Average assumed rent-rate per acre.	Rent-roll by assumed rent- rates.	Area.	Average assumed rent-rate per acre.	Rent-roll by assumed rent- rates.	Difference be- tween columns 8 and 9, i. e. in- crease to rent- roll.	Half of column 10.	Jama in 1841.		
I	5	3	8	5	6	7	8	9	10	11	12	13	
1. Pâr Chapâr	53	18	66 Wet 1st ransil. 12,078 Wet 1st ransil dry, but for canal. 7,261 Wet 2nd ransil dry, but for canal. 1,736 Dry 1st ransil. 6,291 Dry 2nd ransil. 14,097 Dry bhar.	6 0 0 3 5 0 1 6 4 3 1 2 1 14 1 1 2 6 4 2 3	306 0 0 49,367 7 0 11,091 12 0 6,313 5 0 11,650 14 0 16,474 12 6 95,474 2 6	12,744 Wet 1st ransil. 7,261 Wet 2nd ransil. 1,736 Dry 1st ransil. 6,291 Dry 2nd ransil. 14,097 Dry bhar.	5 9 0 3 12 6 3 0 5 1 14 1 1 2 3 3 2 0 5 15 10	76,378 14 0 27,541 14 0 5,054 10 0 11,850 14 0 16,474 12 6 1,31,776 0 6 1,06,740 1 3	Es. a. p. Es. a. p. Es. a. p. Es. a. p. Es. a. p. Es. a. p. Es. a. p.	Es. a. p. Es. a. p.	Es. a. p. Es. a. p.	Es. Es.	Es.
Total	...	...	42,149 3,918 Wet 1st ransil. 12,786 Wet 1st ransil dry, but for canal. 3,008 Wet 2nd ransil dry, but for canal. 6,468 Dry 1st ransil. 7,545 Dry 2nd ransil. 11,766 Dry bhar.	1 12 4 3 3 5 1 9 7 1 1 1	5,445 0 0 29,786 14 0 12,007 8 0 12,573 7 0	2,008 Wet 2nd ransil. 6,468 Dry 1st ransil. 7,545 Dry 2nd ransil. 11,766 Dry bhar.	3 14 0 3 13 1 1 9 7 1 1 1	11,638 6 0 17,803 2 0 12,007 8 0 12,573 7 0	26,301 14 6 16,150 15 0	16,150 15 0	55,543	69,850
2. Mumbaragar	...	786	3,138	4 0 3	55,131 6 0	Wet 1st ransil.	5 15 10	1,06,740 1 3					

10

3. Bhikhareri	163	40		5 13 0	1,174 2 0	17,606 Wet 1st ransil.	2 5 10	98,584 8 0	36,845 13 0	19,433 14 6	49,931	74,311
Wet 1st ransil.	302	17,606	Wet 1st ransil.	5 13 0	1,174 2 0	17,606	2 5 10	98,584 8 0	36,845 13 0	19,433 14 6	49,931	74,311
Wet 1st ransil dry, but for canal, 6,109	17,606	65,001 12 0	Wet 1st ransil.	3 11 3	65,001 12 0	Wet 1st ransil.						
Wet 2nd ransil dry, but for canal.	6,109	10,428 1 0	Wet 2nd ransil.	1 11 4	10,428 1 0	Wet 2nd ransil.	3 7 3	21,078 6 0				
Dry 1st ransil.	2,513	7,912 3 0	Dry 1st ransil.	3 6 9	7,912 3 0	Dry 1st ransil.	3 14 4	6,999 9 0				
Dry 2nd ransil	7,458	12,088 7 0	Dry 2nd ransil.	1 9 3	12,088 7 0	Dry 2nd ransil.	1 9 3	12,088 7 0				
Dry bhar.	12,333	12,934 3 6	Dry bhar.	1 0 9	12,934 3 6	Dry bhar.	1 0 9	12,934 3 6				
Total	...	...	Total	3 5 10	1,09,585 11 6	46,371	3 3 4	1,46,384 3 6	36,845 13 0	19,433 14 6	49,931	74,311
4. Jaali Jansath	6,273	1,568	Wet 1st ransil.	5 12 3	45,424 2 0	21,997	5 3 0	1,27,870 8 0				
Wet 1st ransil dry, but for canal.	14,156	54,061 11 0	Wet 1st ransil.	3 13 1	54,061 11 0	...						
Wet 2nd ransil dry, but for canal.	9,348	4,100 13 0	Wet 2nd ransil.	1 13 3	4,100 13 0	2,243	3 14 3	6,809 14 0				
Dry 1st ransil.	7,157	26,158 5 0	Dry 1st ransil.	3 10 6	26,158 5 0	Wet 2nd ransil.	3 14 10	20,976 6 0				
Dry 2nd ransil.	5,200	8,849 13 0	Dry 2nd ransil.	1 11 3	8,849 13 0	Dry 1st ransil.	1 11 3	8,849 13 0				
Dry bhar.	13,717	13,191 1 0	Dry bhar.	1 1 9	13,191 1 0	Dry 2nd ransil.	1 1 3	15,191 1 0				
Total	...	...	Total	3 10 0	1,53,806 13 0	50,319	3 9 9	1,81,697 10 0	27,891 13 0	13,945 14 6	56,152	81,110
5. Khaisauli	10,812	2,700	Wet 1st ransil.	6 5 1	85,334 4 0	22,807	6 6 3	1,46,643 4 0				
Wet 1st ransil dry, but for canal.	9,396	42,790 5 0	Wet 1st ransil.	4 9 3	42,790 5 0	...						
Wet 2nd ransil dry, but for canal.	1,477	3,465 6 0	Wet 2nd ransil.	3 5 6	3,465 6 0	1,477	4 3 3	6,664 2 0				
Dry 1st ransil.	5,809	24,591 0 0	Dry 1st ransil.	4 3 9	24,591 0 0	Wet 2nd ransil.	3 4 3	18,949 8 0				
Dry 2nd ransil.	6,774	12,621 2 0	Dry 2nd ransil.	2 3 0	12,621 2 0	Dry 1st ransil.	3 2 0	12,621 2 0				
Dry bhar.	6,356	8,619 4 0	Dry bhar.	1 5 3	8,619 4 0	Dry 2nd ransil.	1 5 3	8,619 4 0				
Total	...	...	Total	4 3 3	1,77,431 8 0	42,223	4 3 11	1,93,497 4 0	15,075 12 0	7,537 14 0	65,378	88,106

34. In the compilation of this statement it has been assumed that had the Ganges Canal not been constructed there would, during the thirty years between Mr. Thornton's settlement and the present revision, have been an increase in the irrigated area amounting to 25 per cent., or 1,568 acres. This assumption is shown by the experience of those estates into which canal irrigation has not been introduced to be a sufficient one. The probable area of irrigation independent of the canal having been obtained, it might seem that all that remained to be done was to calculate the difference between the assets of the increased area at wet rates and that which would have been obtained by dry rates. But in a plentifully irrigated tract, the rates applicable to dry land are lower than they would have been if only a small proportion of the area had been watered. As a rule, in such a tract the land which has been left unirrigated lies high, or is distant or inferior. The manure, moreover, being insufficient for the irrigated tract, is not expended on the dry land, which is therefore less carefully cultivated on the whole than formerly. In this way the rent-rates which are suitable for the dry land of a fully irrigated tract, would have been and are low for similar land in a neighbourhood in which only a small proportion of the area is irrigable.

Method of compiling foregoing statement.

For dry 1st rausli, therefore, there have been assumed rates which would have been fair had irrigation been extended to 10 instead of nearly 50 per cent. of the cultivated area. This procedure was all the more necessary in the northern parganas, in which formerly all the best crops were grown on dry land, and would have been so grown now had the canal not been constructed. Had there been no canal, the dry land of these parganas would have been used for sugarcane, cotton, and rice, while now only wheat and juár or urd alternate, and the land is never manured. With respect to 2nd rausli on the other hand, credit has been given to the canal for the full difference between wet and dry rates, as although the increase in the productiveness of such land is owing as much to improved cultivation as to irrigation, the improvement in cultivation would not have taken place generally had the land not become irrigable. In some parganas there is a considerable difference between the revenue by the assumed rates and that actually fixed. This is owing in a great measure to the circumstance that the supply of canal water is greater than the people can properly utilize, and to the assumed rates having proved in consequence too high for the villages in which the water-supply was excessive and the irrigable area had been most rapidly extended. On the other hand, if the canal had not been constructed, more allowance would have been made in consideration of the uncertainty of the produce, of the circumstances of owners and cultivators of the less industrious castes, who, if their land had been left dry, would have required more indulgence than it has now been necessary to show to them. The full difference, therefore, between the result of the wet and dry rates has been credited to the canal, and when the many benefits conferred by the canal, which it is not easy to calculate, are considered, I do not think that I have done more than justice to the canal.

35. The considerable difference between the estimated increase to the assets per acre of increased irrigation and that per acre of land recorded as irrigable from the canal in parganas Jánsath and Khátauli is owing to the fact that in these two parganas, and especially in the latter, canal irrigation has in a great measure merely superseded the use of wells, and that a considerable portion of the area irrigated by the canal might have been watered even had the canal never been constructed. The result of the substitution of canal for well irrigation has been to economize labour, and in this way to render the rapid improvement of cultivation possible, but still the effect upon the revenue and the benefit to the country are less than if the canal water lavished upon the well irrigated land of these parganas had been given to drier tracts.

Influence of previous irrigation upon the estimate.

36. In some parganas, notably in Bhúkarheri and Bhúmáh Sambalherah, the increase to the assets and assessment has, it is likely, been understated, and throughout

Increase of assets probably understated.

the tract it is difficult to estimate the indirect benefits which have been conferred upon this tract by a work which has given such an impulse to improved and extended cultivation, and, by enriching the people and saving them from periodical losses from drought, has raised the condition of the agricultural classes and enabled them to do more for the land. It may therefore, I think, be assumed that the gain to the land revenue derived from the canal has been not less than Rs. 78,804-3-4, and that the many benefits, the money value of which cannot be easily calculated, which the canal has conferred upon the district, and among them a considerable part of the increased cultivation, far more than make up for the deterioration of the khádir lands, the injury to which in the tract under report calculated by the rent-rates amounts to Rs. 2,532, giving a loss to the revenue of Rs. 1,266.

Amount lost to Government.

37. Even if it were impossible to secure the whole of the corresponding sum which this calculation shows to have been left in the hands of the proprietors of the land, it may safely be assumed that water-rates might be fixed with a moderate amount of accuracy which would lessen by Rs. 50,000 the sum left in the hands of the landowners. If this assumption be a fair one, the loss to the State in this tract alone arising from the system of assessment now in force will amount during the term of a twenty years' settlement to a sum no less than Rs. 10,00,000, while the system of canal-revenue administration which has become interlaced with that of the revenue settlement has involved before settlement the loss of at least an equal amount. But over and above the loss of water-rates which might have been earned in the revenue-paying portion of the Ganges Canal tract, there is a further serious loss with respect to the 11,953 acres of revenue-free land which are irrigable from the canal. Calculated on the same system which has been followed in the case of revenue-paying land, the increase to the assets amounts to Rs. 20,613-9-0, while at the rough general rate fixed by the Board of Revenue a fair estimate of the increase to the assets is Rs. 23,906, the whole of which is lost to Government.

I have been conscious throughout the settlement that I have been assessing on a system which in common with the great majority of revenue officers in the North-West Provinces I held to be a wrong one, and I have stated my opinion on the subject in each revenue report as it was submitted, but the question, important as it seemed to me, failed to attract attention.

Practicability of raising the water-rates.

38. I would now in conclusion put on record the opinion which I hold very strongly regarding the proposals often made, and likely to be repeated more frequently as the regret at the large income that has been lost grows stronger, for the enhancement of the canal water-rates. This has been done with regard to rice; but raising of the water-rate for rice was desirable for other than canal revenue reasons, and in most villages in this tract rice was an optional crop which had not ordinarily been taken into consideration in fixing the land revenue and rents. But to raise the water-rates generally is to affect the whole basis of assessment. Land that was in former days worth from Rs. 3 to Rs. 4 per acre has become worth Rs. 6 and upwards because it has been supplied with flush irrigation at a certain water-rate. If the water-rate is raised, it is obvious that the whole basis of assessment is affected. We raise the land revenue because irrigation at low water-rates has enhanced the value of the land; to raise the low water-rates now would be to remove the argument which led to the raising of the revenue.

Necessity of further investigation.

39. The loss to the State from the present system has been so great that it is no wonder that considerable anxiety should be shown to retrieve a portion at least of the revenue that has been abandoned; but one of the worst features of the system of assessment which has been adopted is the way in which it fetters the revenue administration of the canal. Fortunately, however, the periods of settlement in the upper Doáb districts, although unhappily extended, are drawing to a close, and the interval which must elapse before settlement operations are again begun in Saháranpur and Bulandshahr would

best utilized, not in disturbing the basis of existing settlements, but in preparing by patient investigation for a future settlement on sounder principles than those which have guided the assessments now in force.

40. For this purpose the revenue-free estates, in which Government is bound by no engagements, offer an admirable field for investigation and experiment, and their area is so great that an important addition to the revenue might be obtained by the introduction into them of full water-rates. And considerable as the interval still is, which must elapse before the revision of settlement can begin, it is necessary that the principles on which it shall be conducted shall be fixed in advance, and that these districts should not be again exposed to the danger of a hasty decision, formed after the work of settlement had been to some extent carried on, in doubt as to which of the rival systems was ultimately to prevail.

Utilization of revenue-free estates.

41. The estimated increase to the assets from irrigation at the present rates is Rs. 1-9-6 per acre of increased irrigation estimated to be due to the canal, whereas in villages in which irrigation has been given to a limited area of good land alone, the increase rises to Rs. 3 per acre. As this point and the one connected with it of the practicable addition to the present water-rates are still of some practical importance, I append the substance of a note written with reference to the enhanced water-rates since fixed for the Agra Canal :—

Actual increase to the assets from canal irrigation.

“ 1. In the upper Doab, in which flush irrigation from the canal was almost universal and irrigation by lift was rare, the important increase to the rental of canal-irrigated land was the argument usually adduced to show that the water-rates charged by the Irrigation Department were low. And the argument is a very strong one; if land which, before coming under irrigation from the canal could pay a rent of only Rs. 3-8 to Rs. 4 per acre, can now pay Rs. 6 to Rs. 7, a water-rate of Rs. 3 on an average being charged, it seems absolutely certain that Government, by increasing the water-rate, could intercept a portion of the increased profits which are appropriated by the landlord.

Argument from effect of flush irrigation on rents.

“ 2. Mr. Buck in his note on irrigation in pargana Tirwa argued from the ability of cultivators to lift water at the present rates, their ability to pay very much higher rates than are at present charged for flush irrigation. Fortunately for a tract in which population is still insufficient, irrigation from the canal by lift is very exceptional in the Ganges Canal tract of this district; but the experience of the villages in which it has to be resorted to entirely confirms Mr. Buck's conclusions, and those which had been arrived at from the more obvious argument in the upper Doab, the enormous enhancement of the rental owing to the supply of canal water flush at the present rates.

Argument from lift irrigation.

“ 3. In the upper Doab irrigation is required a less number of times in the year than in the lower Doab; and it may be assumed that if the number of waterings given annually be divided by the number of irrigable acres, the average can hardly exceed two waterings annually, so that the land and water-rent for good land irrigated flush and by lift respectively might be stated roughly as follows—

Calculations derived from existing rates.

	Rent of land.		Total.	Average water-rate.	Cost of lift and distributing water.	Total.
	Original rate.	Owing to canal.				
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Flush	3 12 0	2 4 0	6 0 0	3 0 0	0 6 0	9 6 0
By lift	3 12 0	0 12 0	4 0 0	2 0 0	3 0 0	9 0 0

“ The rent given is that of good land in a village in which the supply of canal water given can be fairly utilized. The addition to the rental owing to the canal is in excess of the numerical average arrived at, but it is a fair average for a good village in which

the population bears a sufficient proportion to the irrigated area; the average water-rate is in excess of that arrived at by dividing the average income from the Ganges Canal by the area irrigated from it, but Rs. 3 represents the average payment to the canal per acre of land irrigated from it in an ordinarily good village; the arithmetical average is only Rs. 2-12.

"The charge for lift is the lowest which has been ascertained in this district—Rs. 1-8 per pukka bigha for two waterings. A more ordinary contract rate is Rs. 2 per pukka bigha. This would give Rs. 4 per acre and would admit of a greater possible enhancement of water-rate; but as far as can be judged from the difference between flush and lift rent-rates, the seasons help the cultivator irrigating by lift more than most calculations take for granted.

"4. If a man watering by lift can pay in this neighbourhood Rs. 5 for water, it is obvious that a man receiving canal water flush could pay more than Rs. 3-6 for the advantage. The large margin left by low water-rates is eventually added to the rent, and the greater part of this addition might be appropriated by the Canal Department, and the rent-rate charged for land watered by one lift is a moderate one. In many villages it would stand at Rs. 4-14 or even Rs. 5-4, thus increasing the total payments for land and water to Rs. 9-14 and Rs. 10-4.

"But adhering to the old figures, if Rs. 3-12 be a full rent for fair dry land, and the cultivator irrigating by lift can pay Rs. 5 for water, it is clear that, even assuming that there is no margin left after this payment, the cultivator irrigating flush might pay quite Rs. 2 more than he does; and where the effect which even lift irrigation at the present rates has on rents is considered, it appears that the present water-rates might be increased by two-thirds. And the practical result of the calculation is not affected if, instead of the estimated expenditure per acre irrigated, be entered the estimated expenditure per acre irrigable on the assumption that irrigable land is unirrigated one out of three seasons.

"The calculations would then stand:—

		Rent of land.		Total land rent.	Average annual charge for water per acre irrigable.	Average annual cost of lift and distribution of water.	Total.
		Dry rate.	Due to canal irrigation at low rates.				
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Flush	...	3 12 0	2 4 0	6 0 0	2 0 0	0 4 0	8 4 0
Lift	...	3 12 0	0 12 0	4 8 0	1 5 4	2 0 0	7 13 4
		3 12 0	1 2 0	4 14 0	1 5 4	2 0 0	8 3 4
		3 14 0	1 8 0	5 4 0	1 5 4	2 0 0	8 9 4

Result of calculations.

"5. Now, taking the lowest rent-rate for land irrigated by lift, it would appear that for such land the annual charge for water per acre irrigable amounts to Rs. 3-5-4, and that this charge leaves a margin which, not being appropriated by the water-owner, is eventually taken by the landowner. Taking the two together, the water charge and the margin, and comparing the sum with that paid for flush irrigation, we get a possible enhancement of water-rate to the amount of Re. 1-13-4, or over 90 per cent., or without taking any increase of rent into consideration, a possible enhancement of water-rate amounting to Re. 1-1-4, or nearly 50 per cent.; this may be looked upon as a safe minimum. The possible enhancement given by the enhancement of rental of fields irrigated flush is Rs. 2-4-0, or 100 per cent. The increase to the rental owing to irrigation from the Ganges Canal, almost entirely flush in this district, is estimated at Re. 1-5-6 per acre ordinarily irrigated from the canal and Re. 1-9-6 per acre of increased irrigation; but this increase to the rental has been greatly lessened by the needlessly lavish way in which canal water has been poured over tracts which are unable fully to utilize the supply given to them.

Argument derived from expenditure on lift irrigation.

"6. But theories cannot always be carried to their logical conclusions; if the Government had not been fettered by the system on which assessments have been based, the following rates might have been levied, and they are, I believe, suitable for newly irrigated land.

Water-rates suggested.

Cane, rice, garden crops, singharas	...	...	Flush Rs. 7 8, Lift Rs. 3 12 annual.
Rabi, indigo, and cotton	...	...	" " 3 8 " " 1 12 per fasl.
All kharif crops not specified above	...	...	" " 3 0 " " 1 8 "

"When rice is followed by cane, the rice might be charged Rs. 6, as the cultivator would be charged for one fasl only. Such a rate would restrict rice cultivation to the best land, and to such an extent of it as the cultivator is able to manure effectively and keep under the most careful cultivation.

"The lift rates are somewhat higher in proportion to those proposed for flush irrigation than any calculation will justify, but in practice the expense of lift irrigation is lessened by opportune showers, which, although they cannot easily be taken into account, none the less affect the cost of lift irrigation in a term of years.

"The water-rates for crops other than rice I would enhance not so much in order to restrict irrigation as to secure a fair return to Government, and to obviate the possibility of a very decided effect on the rental and the necessity of a landlord's rate.

"7. The restriction of canal irrigation can be most easily effected by the prudent distribution of canal water, and excessive raising of the rates would prevent the full benefit to the country from the construction of the canal. Practically, in the upper Doáb, the only crops ordinarily irrigated in the kharif are sugarcane, cotton, and the finer rice. A low rate permits the cultivator no doubt to grow these crops in inferior lands, but this is especially the case with rice, and that has been provided for. To charge high rates with the special object of restricting cane and cotton to a small area of very highly manured land would be to attempt to change the system of agriculture in the upper Doáb. A man might perhaps grow finer crops if he restricted the manure at his disposal to (say) one-quarter of his land, but the average would be less good than at present, when the Ját of the upper Doáb takes his cane round the whole of his irrigated land, and manures the whole of that irrigated land once in every three, four, or five years, instead of half of it only in two. The limitation of irrigation must be effected not so much by prohibitive rates, which would do more injury in poor tracts than good in rich neighbourhoods, but by prudent distribution of canal water.

Restriction of canal irrigation.

"If the Canal Department will only fix a certain proportion of the area to be irrigated and will hold to it, the evil of over-irrigation will easily be avoided and the supply of water will be regularly utilized. A supply of water sufficient for the irrigation of 40 per cent. of the area of a village each year will provide fully for 60 per cent. of the area, and may be made to secure about three-fourths in a season of emergency; and what is of considerable importance, the water-supply is likely to be utilized every year, not merely once in a decade. In ordinary seasons half the rabi supply runs to waste, and will do so until distribution is much more effective. In a new canal the object should be, in my opinion, to irrigate a limited area in many villages rather than a large area in a few. Distribution will cost more, but the revenue will be more constant and the good done will be much greater."

CHAPTER V.

RECORDS AND CONCLUSION.

The settlement records.

The method of compiling the settlement record is generally uniform, and there is no object in describing operations which vary but little in different districts. If the practice in Muzaffarnagar has varied from that ordinarily followed elsewhere, it has, I hope, been in the systematic attempt to fix fair rent-rolls and to secure the rights of the tenants in the fourth chapter of the wajibularz.

Khewats.

2. The preparation of khewats was rendered comparatively easy by the short period which had elapsed since settlement, and by the general intelligence of the people quickened by their recent experience of settlement operations. Disputes regarding proprietary rights are often difficult and troublesome, but subsequent experience has led me to believe that the greatest difficulty and trouble are the ascertainment among an ignorant or careless population of where the disputes lie, and of the grounds for the claims which are made. In Muzaffarnagar there is a considerable leaven of education; the people are naturally shrewd and intelligent, and constant contact with the Canal and Settlement Departments has given them familiarity with the affairs which chiefly concern them. Even in cultivating communities, some more or less educated and intelligent members were generally ready to fight on either side the battles of their friends, and to bring forward with tolerable promptitude and distinctness the claims that were to be made. On the whole disputes were not very numerous, but here and there a Shaikh township contributed almost as many cases as the rest of the pargana.

Case work.

3. The cases of all kinds instituted during the continuance of settlement operations were as follows :—

Description of cases.	Instituted.	Disposed of.				Pending.
		On trial.	Adjusted or withdrawn.	Struck off in default.	Total.	
Revision of settlement records ...	4,991	4,448	33	350	4,991	...
Boundary cases ...	34	33	1	...	34	...
Adjustment of rents ...	999	890	36	43	999	...
Alterations of jama ...	1	1	...	...	1	...
Minor process of dures ...	10	10	...	...	10	...
Sequestration, revenue ...	1	1	...	...	1	...
Suits under sections 33 and 34, Act X. of 1869, and under Act XIV. of 1863.	340	295	34	20	340	...
Other applications and cases ditto ...	437	453	2	2	437	...
Suits under Act XVIII. of 1873 ...	2	2	...	...	2	...
Ditto ditto XIX. of 1873 ...	437	287	32	120	439	48 }.
Execution of decrees under Act X. of 1859	125	109	...	13	123	2 }
Patwáris' cases ...	273	272	1	...	273	...
Mutation in malga- { By inheritance ...	41	41	...	...	41	...
zari estates. } " private transfer	40	40	...	...	40	...
Ditto registered deeds ...	11	11	...	...	11	...
Mutations in muáf estates ...	45	45	...	...	45	...
Wards' estates ...	499	499	...	...	499	...
Proceedings of other offices ...	58	58	...	...	58	...
Single applications and petitions ...	1,283	1,283	...	...	1,283	...
Appeals and revision of orders ...	104	101	3	...	104	...
Ditto to commissions ...	20	20	...	...	20	...
Miscellaneous ...	295	295	...	...	295	...
Total ...	10,115	9,414	192	458	10,064	51

Rent-rolls.

4. In the compilation of the rent-rolls my object was not only to record the relations between landlord and tenant which I found existing, but to settle as far as possible the terms on which tenants with rights were to hold their land, and in this way to obviate disputes in future. If the people had been more litigious, it might have proved impossible to interfere generally and without the formal application of one of the parties in the interior administration of the village; but the arbitration of

* Transferred to collectorate on close of settlement work.

the officers of the Settlement Department was generally accepted without objection, and both parties seemed willing to agree to an equitable adjustment of their differences. The method adopted, which by the way has been accepted with still greater readiness by the people of a country so different as Bundelkhand, was as follows: With the aid of inspection notes, and especially of estimates made at the time of inspection, suitable rates were proclaimed. The notices elicited all the various objections which with or without reason are so persistently made. In many cases the objections were good: notwithstanding all care mistakes had been made; soil and irrigation entries were impugned; the suitability of the rates was assailed; even where they were generally accepted it was urged that they were inapplicable to distant fields or to portions of the estate which near enough to the site had been rendered inaccessible by an unbridged *rājba* or by the railway, or were exposed to depredations of men or animals, or were injured by the shade of trees. Individuals would claim favourable rates, or on special grounds oppose enhancement. Such objections are not disposed of without much expenditure of time and trouble, but the outlay of both is greatly less when the estate as a whole is taken up, and a variety of separate cases is avoided. Expense is saved to both parties, and although perhaps the investigation with reference to each individual is less thorough than if each had brought his separate case, and this is by no means certain, there are many distinct advantages besides the saving in time and in money. The influence of the more reasonable members whether of the proprietary or cultivating bodies is brought to bear upon their neighbours, and while on the one hand a harsh claim that might be pressed against a few obnoxious individuals is abandoned when it must be maintained against a whole community, on the other, unfounded objections to fair demands are relinquished or at least modified under pressure from the more reasonable and peaceable members of the brotherhood. It may be hoped, therefore, that the advantages of the system followed more than counterbalanced the most obvious disadvantage that in the consent of a majority the real grievances of a small minority may have been overlooked.

5. Closely connected with the rent-rolls is the commutation of kind rents into money rents. The applications for commutation were numerous, and frequently one application concerned a large number of cultivators. Unfortunately, under the then existing law Act X. of 1859, such applications were admitted only during settlement, and the result was that many cultivators were induced to apply for money rents who would have done more wisely if they had waited. There can be little question that an industrious thrifty cultivator with a fair proportion of land under irrigation is more likely to prosper if he pays a fixed money rent than under the crop and kind rent system. He can improve his cultivation by increasing the proportion of the best crops without raising his rent, and he knows that the enhanced productiveness of his land owing to increased industry and expenditure of capital will not be at once shared by the landlord. He is thus induced to expend labour and money in the improvement of his cultivation, and if seasons be favourable he enriches himself. But if the cultivator be neither industrious nor thrifty, less advantage is likely to result to him from money rents, and the danger which he incurs is much greater. His highest aim is probably to keep his head above water, and if good seasons bring bumper harvests, the extra profits are soon spent, and bad years or a fall in prices soon convince him of the disadvantages of the money rent system hitherto overlooked.

Commutation.

After many years of abnormally high prices, a large number of cultivators applied for money rents the more eagerly that they knew that, under the existing law, the time for such applications was quickly passing by. Instead of waiting as they might now do until their circumstances were such that they could hope to pay their way in unfavourable seasons and years of falling prices, they thought only of the advantages which they had recently lost and insisted on money rents being fixed for them. I had noticed the almost universal surrender in the Ganges valley of the money rents fixed under Mr. Martin's order, and was afraid that in the first season of difficulty

many of the applicants would be as ready to revert to crop and kind rents as they were then anxious to relinquish the old system; but it would have been impossible, even if the law had allowed it, to decide what tenants were suited by their character and circumstances for money rents, and what cultivators ought to be kept under the old system. A succession of indifferent seasons and a fall in prices have made money rents far less attractive than they appeared during settlement, and the relinquishment by a considerable number of cultivators of the money rents fixed for them at settlement has been one of the grounds for the belief which has been at times expressed that the assessments leaned somewhat towards severity.

The preparation of the administration papers.

6. In the preparation of the administration papers, special attention was devoted to the chapter setting forth the rights and privileges of cultivators, although the constitution of the proprietary body was not neglected. But as at Mr. Martin's settlement this record has been attested by proprietors alone, there was less to be amended in that portion of the record which stated the relations between the State and the proprietary body, and those among the proprietors themselves. Indeed, the only clause in this portion of the administration paper which, as far as my observation went, led to serious injustice, was that regarding the right of pre-emption, and in this respect it is very difficult to word the clause so that it cannot be made productive of injustice. The general tendency of the stipulation on the subject is to overlook the claims of race and relationship, and to study solely actual ownership in the thok or patti; and it has frequently happened that a member of the same clan and family has been prevented from purchasing the share of a kinsman in his ancestral village by the money-lending purchaser of yesterday who has obtained a footing in the patti of the seller.

But in the fourth chapter of the wajibularz the mistakes had been much more serious and had been productive of much injury to the cultivators. In the sharah-naqdi villages especially, which have already been mentioned in this report, and in which the rights of the proprietors had been limited by Mr. Thornton to a fixed percentage (generally 18 per cent.) on the Government revenue, the privileges of the cultivators had been clearly stated at Mr. Thornton's settlement, and had been maintained to the close of the period for which it lasted. In the administration papers of Mr. Martin's settlement, attested by the landlords alone, the old privileges were silently abrogated, and it was gravely recorded that men who had certainly for twenty years, and as far as can be ascertained for many generations, been sinking wells and planting trees had authority to do neither. The tenants went on planting in unhappy ignorance of the class legislation to which they had been subjected, until they found to their cost that our courts, civil and revenue, were ready to enforce the landlord-made regulations which had thus quietly been drawn up.

Restriction of tenants' claims.

7. As has been already stated, there seems little reason to doubt that Mr. Thornton had gone as distinctly too far in favour of the tenants as his successor did in favour of the landlords, and no attempt was made to revive the extraordinary privileges which Mr. Thornton had created. I endeavoured with some success to induce the landlords to agree to that independence of the occupancy tenant in the land for which he paid rent or of which he held prescriptive right of occupancy, which he appears to have enjoyed long before the date of Mr. Thornton's settlement, and I set my face against those vague claims to cut wood of spontaneous growth outside his holding without the permission of the proprietors, to which the record of Mr. Thornton's settlement had given rise. In this way the occupancy tenant was ordinarily allowed to repair his house in the village, to dispose of the trees growing in his courtyard, to plant and cut trees in his occupancy holding. The claims of the tenants, on the other hand, to build houses on land not in their possession, to cut trees not planted by them on land for which they did not pay rent, to hold groves free of rent, were maintained only in the very exceptional cases in which the evidence of the right was clear.

Groves.

8. In fixing rent for land under trees, dry rates were usually fixed for land that was almost universally capable of irrigation. The argument for this procedure, that

as Government had remitted the revenue on plantations, the landlord got as much from the lower rate as he would have received if the higher one had been shared by Government, was generally accepted as equitable, the more so that the landlord was guarded against all claims to reduction of rent within the period of settlement on account of injury to the crops caused by the plantations of his tenants. With the assertion, therefore, of the rights of tenants was combined the distinct limitation of their claims, with trifling exceptions, to the lands for which they paid rent,

In only one case, as far as I know, were the conditions of the *wajibularz* formally contested in the civil court. The circumstances are somewhat peculiar and are worthy of being stated as showing the true tactics of the money-lender. The village Chapár was cultivated by an ancient community who would no doubt have been declared *zemindars* at the beginning of our rule had the treasurer of the Landhaurah Raja not purchased the rights of the Sayyid overlord, which were deemed too shadowy to be maintained in other villages. But the Bania purchaser was more wealthy and astute, and obtained full proprietary rights. At settlement he cheerfully conceded the privileges which his Sayyid neighbours and long established communities were granting to their occupancy tenants. In this way he avoided all investigation at the time of settlement, and eventually obtained from the munsif of Muzaffarnagar a reversal of the stipulation in the *wajibularz* on the grounds that no sufficient investigation had preceded the compilation of the record, and that such a privilege, that of planting trees in an occupancy holding, was obviously opposed to proprietary rights. In 115 out of 420 estates the right of occupancy tenants to plant trees in their occupancy holdings was admitted, but in one of these the admission was afterwards cancelled by the civil court; in two estates the right was found not to exist, and in 303 there was no custom on the subject. These figures show that if in this respect I went as far as facts admitted, I did not altogether disregard custom.

9. And it is in my opinion greatly to be regretted that the right of occupancy tenants to plant groves should still be left a question as to custom, which often comes to mean the ability of a landlord by force or chicanery to obtain some precedent in his favour. It was the opinion many years ago of a close and accurate observer, Colonel Sluman, who wrote on this subject with special reference to this neighbourhood, that "our Government during the thirty-five years that it had held the dominion of the upper Doáb had prohibited the planting of mango groves while the old ones were fast disappearing." The views which were then represented to actuate the planter of trees are now no longer general, but the circumstance that people are now so ready to plant trees for their own convenience, pleasure, or profit, renders any other inducement unnecessary; and an addition to the revenue law to the effect that occupancy tenants might plant trees in their holdings would, I am convinced, be objected to mainly by the more grasping of the mushroom proprietors whom the mistakes of our administration have given so needlessly large a share in the landed property of this and adjoining districts. Indeed, the objection to tree-planting by tenants on the part of the old proprietary families seems to be chiefly due to an unhappy clause in the "Directions to Settlement Officers," which states the three indications of proprietary right to be "the digging of a well, the planting of a garden, and the location of a labourer." Such wholesale statements must be wrong with reference to many parts of an extensive territory like the North-West Provinces, and in no district in which I have served long enough to master the customs of the country has the exercise of the two first privileges been considered any proof of proprietary right, although they no doubt have been held to give a certain claim to engage in preference to outsiders for an ownerless estate. The third privilege has been frequently exercised by the heads of village communities in Muzaffarnagar, and when there are so many more obvious and more invariable proofs of proprietary right, it is to be regretted that so mischievous a clause should have found its way into a work which has so many claims to respect. A short section authorizing occupancy tenants to plant trees, and at the same time asserting the ownership in the land on the part of the proprietor, his right to undiminished rent, and a preferential

Necessity of legislating
on the subject of groves.

claim to the trees in the event of arrears, or to purchase them in the case of sale, would greatly strengthen the position of the tenant without practically injuring that of the proprietor, and would do much towards securing that area of plantations which on many grounds is so desirable. Bit by bit we have introduced into Upper India an exaggerated idea of the rights of proprietors, which, new to the old families, has been most fully taken advantage of by recent purchasers, to the disadvantage of the people at large and to the injury of the country and of our administration.

Responsibility for offences.

10. Another point with reference to which the landlord-made law of the administration paper of the recent settlement had pressed hardly upon certain cultivators was the transfer to the heads of the cultivating communities of the responsibilities legally resting with the proprietors. At Mr. Thornton's settlement, in the villages in which the proprietors' rights had been reduced their responsibilities also were reduced, and the cultivating community to which the management of the estate was entrusted was held answerable for offences committed within the limits of the estate. In other villages in which the position of the proprietors was not materially affected, it was usual for the mukaddams or heads of the village community, who received an allowance in land or money in consideration of the help they furnished to the landlord, to undertake these responsibilities. When the settlement was revised and the landlords were permitted to control the compilation of the administration paper, they in many cases made the most of the opportunity that was offered to them by re-enacting the old responsibilities and at the same time depriving the mukaddams of the old remuneration. It was necessary, therefore, to relieve the heads of the cultivating communities from responsibilities which did not attach to them by law, and which they had never consented to undertake.

Manorial dues.

11. The administration papers were compiled under the old rules, and the instructions with reference to cesses were less explicit than they have since become. At first I endeavoured to record in complete detail the dues that were given to the zemindars by residents in the village, whether cultivators, village servants, or shopkeepers. But I soon found that the investigation would entail an enormous amount of additional labour, and that the moment details were mooted, disputes began. Cultivators would acknowledge that they paid dues in excess of their rent, Chamárs that they furnished shoes and irrigating bags, sweepers that they gave fowls and eggs, shepherds blankets, weavers thread and cloth; but amounts and numbers were hotly disputed, and even the most laborious investigation failed to produce a satisfactory result. In one large village the Telis lighted up the chaupals on the night of the Dewali, and this was acknowledged by both parties, but the claim of the Ját zemindars to a fixed number of seers of oil was hotly disputed; scores of witnesses were ready to appear on both sides, and such investigations which would have occasioned an immense amount of ill-will were given up, and in the majority of cases merely general entries, such as that the menial caste performed for the landlords the usual services, were recorded.

Absolute correctness would have necessitated a separate entry not only regarding each caste, but also with reference to almost every landlord. In many villages the old landlords received dues which were denied to recent purchasers; in some instances, indeed, the ex-proprietors received the old dues long after their proprietary rights had been alienated. But there was another reason which rendered minute detail unadvisable; the custom of paying dues is unquestionably dying out, and there is no object in Government attempting to stereotype customs which are much better left to depend upon the relations between the landlord and his dependents. In very few cases were the dues received from non-cultivators of much value. Those actually recorded in detail as given by non-cultivators are shown in the following abstract:—

Abstract statement of cesses other than those levied on occupation of land.

Caste.	Nature of cess.	Articles given.	59 Mahals, Per Chapér.		73 Mahals, Muzaffarnagar.		54 Mahals, Bhukharhari.		71 Mahals, Jánath.		104 Mahals, Kádtáuti.		59 Mahals, Bhánah Sambal- heruk.		Total.	
			No. of villages.	Average value per village.	No. of villages.	Average value per village.	No. of villages.	Average value per village.	No. of villages.	Average value per village.	No. of villages.	Average value per village.	No. of villages.	Average value per village.	No. of villages.	Average value per village.
Bania	{ Per 100 jars of rab. " jar of rab " khatti On weighing income, At Diwáli	Money	1	1 0 0	...	...	...	...	...	...	...	...	...	...	1	1 0 0
		4 chks. of rab	...	...	...	...	...	...	...	...	...	...	...	...	1	15 0 0
		Money	...	...	...	...	...	...	...	...	...	...	...	...	1	1 8 0
		Ditto	...	...	...	...	...	...	...	...	...	...	...	...	1	35 0 0
		Khill and sweetmeats	...	...	...	...	...	...	...	...	...	...	...	...	5	0 0 6½
Gadaria	{ Per house " house	Blankets	4	3 0 0	5	1 15 3	24	2 4 0	3	2 12 0	10	2 7 2	5	1 12 9	51	0 4 5½
		Goats	2	2 12 0	4	1 12 0	14	2 11 2	...	...	11	1 12 1	5	1 11 2	36	0 4 9
Chamár	{ Charsa Shoes	Charsa	1	2 8 0	7	3 12 6	20	3 7 7	9	3 8 6	11	3 4 9	8	4 5 6	66	0 5 10½
		Shoes	2	0 9 0	...	...	...	...	3	0 6 4	5	0 7 0	3	1 4 0	13	0 3 3
Juléha	{ " kargah " kargah	Weaving cloth with- out wages.	...	...	...	...	...	...	3	0 12 0	3	0 12 0	1	0 6 0	6	0 5 0
		12 yards cloth	...	...	...	...	...	...	...	...	...	...	...	...	1	0 7 0
		Thread without pay- ing.	...	...	...	...	...	...	3	0 7 6	7	0 2 4	...	...	10	0 0 11½
Sweeper	" house	Fowls	...	...	...	...	...	...	1	0 3 0	6	0 7 0	1	1 2 0	19	0 1 7½
Tell	" mill	Rs. 1	...	...	1	1 0 0	...	...	...	...	...	...	...	...	1	1 0 0
Total			19	...	18	...	71	...	34	...	58	...	24	...	305	...
Fees on marriage of daughters			...	...	1	1 4 0	5	0 3 0	3	2 4 0	15	1 1 10	5	0 4 6	29	0 2 9½

The only item of importance is that of Rs. 35 for weighing fees in one village of Bhúkarheri. Elsewhere, weighing fees are devoted to village purposes and do not form an item in the income of the zemindar.

Example of manorial dues.

12. Dues were most generally recorded in pargana Bhúkarheri, in which original Sayyid proprietors still hold much land, and in which ancient customs have been least interfered with. From this pargana I give the following list of contributions given to the Sambalherah estate when under the Court of Wards. I am inclined to think that less rather than more is received by a family under such circumstances, for a Government officer can less readily exercise that informal pressure which is so effective with defaulters:—

Kharif, per plough	...	1 bundle of chari.
		1 jali of bhúsah.
		1 Government seer of hemp.
		2 jars of canejuice.
		10 stalks of sugarcane.
		1 plateful of sugar.
		1 jali of uplah.
Ra bi per plough	...	1 jali of bhúsa.
Per house— Sweeper	...	2 fowls.
Shepherd	...	2 goats and one blanket.
Chamárs	...	1 irrigating bag, 2 cartloads of grass, and labour for repair of house.
Barbers, bhists, &c., give their service when required.		

But as has been remarked, the collection of manorial dues to such an extent is dying out, and they are paid chiefly to members of the old proprietary classes who still maintain friendly relations with their dependents.

Lambardars.

13. Notwithstanding the general orders of the Board, I felt myself justified in increasing the number of lambardars, more especially in villages owned by cultivating communities. At the recent settlement the instructions issued had been interpreted too literally, and the changes made were in some cases excessively unpopular. In one village particularly which may be taken as an extreme instance of the policy adopted, the number of lambardars had been reduced from five to two. This change was liable to numerous objections; one of the four biswa patias had been in some sort divided so as to make two equal thoks for the two lambardars; the new divisions were too large to be manageable; the jama of each was so large a sum that the lambardars by the receipt of the fees alone were elevated too much above the heads of their brethren. The whole village was in confusion, and constant strife had been the result of a too literal compliance with the Board's orders. The statement which follows shows to what extent the arrangements then made have now been modified. In comparison with 1841 the number of lambardars is now much smaller than it was, but since 1863 no less than 51 new lambardars have been appointed. This increase is owing in a great measure to the formation of new maháls on partition, and only occasional additions have been made to the number of lambardars on other grounds. In practice, the feelings of the people must be considered in matters of this kind, and there is unquestionably a very strong feeling against making the lambardar too powerful. For my own part I think that when the co-sharers are numerous, there should ordinarily be a lambardar for every Rs. 500 of revenue, and even in this district of high rents and assessment I would fix the limit at Rs. 1,000. Great care should be taken not only not to reduce the number of lambardars too rapidly, but to choose the right moment for doing so, and much harm is certain to be done by giving indiscriminate effect to orders which are intended only for general guidance.

Abstract Statement of Lambardars.

Number.	Pargana.	Number of lambardars.			Decrease.		Increase		Remarks.
		1841.	1863.	1873.	Upon 1841.	Upon 1863.	Upon 1841.	Upon 1863.	
1	Púr Chapár ...	140	101	114	26	...	...	13	
	Revenue-free villages ...	6	2	2	4	...	...	...
	Pargana total ...	146	103	116	30	...	...	13	
2	Muzaffarnagar ...	166	126	129	37	...	...	3	
	Revenue-free villages ...	3	10	11	...	...	8	1	
	Pargana total ...	169	136	140	37	...	8	4	
3	Bhúkarheri ...	101	90	91	10	...	...	1	
4	Jauli Jánsath ...	143	126	137	11	...	...	11	
5	Khátauli ...	150	144	160	...	...	10	16	
	Revenue-free villages ...	16	7	8	8	...	...	1	
	Pargana total ...	166	151	168	8	...	10	17	
6	Bhúmárah Sambalherah ...	116	91	96	20	...	...	5	
	Total of six parganas ...	621	678	727	94	...	...	49	
	Total of revenue-free villages ...	25	19	21	4	...	8	2	
	Total of six parganas assessed and revenue-free. }	646	697	748	98	...	...	51	

14. In the arrangement of patwáris' circles a good deal of care and the result of much local experience were more or less wasted, for the work had to be done over again under the new system laid down by Act XIX. of 1873. The system under which I worked might well have been allowed a longer trial, for it had many advantages, and there seems to be no more unfairness in charging a uniform cess for the maintenance of agricultural records than in levying one for roads and schools. In the poorer districts, indeed, it is found that the old uniformity in the cess is still necessary, for the requisite funds can be obtained only by the invariable charge of the highest percentage allowed by the law upon every estate without regard to the amount of surplus; and the system of grading patwáris with reference to their efficiency rather than to the circles in which they worked had obvious advantages.

Arrangement of patwáris' circles.

The objects which I studied in the arrangement of patwáris' circles were the establishment of circles of a manageable size, the fixation of fair salaries; and in the grading of the patwáris, the reward of efficiency and long and good service. With reference to the last point, sudden changes of system fall with peculiar harshness upon men who might have been rewarded with equal facility in another way had earlier intimation been given of the impending change.

The arrangements which were made are shown in the accompanying statement:—

Abstract Statement of Salaries of Patwāris.

Sl. No.	Taluk.	Pargana.	Amount of fees leviable.	EXPENDITURE ON SALARIES.												Total expenditure.	Excess of expenditure on income.	Gross savings.	Net savings.		
				1st grade at Rs. 144 per annum.		2nd grade at Rs. 120 per annum.		3rd grade at Rs. 108 per annum.		4th grade at Rs. 84 per annum.		Rs.	Rs. a. p.								
				Number of patwaris.	Salaries.	Number.	Salaries.	Number.	Salaries.	Number.	Salaries.		Rs.	Rs.	a.					p.	
1	Muzaffarnagar.	Pār Chapār	Rs. a. p. 2,636 9 0	3	432	16	2,160	2	216	4	336			2,144	150 15 0	632 3 0	481 9 0				
2		Muzaffarnagar	4,842 0 2	5	720	23	2,640	6	648	2	168			4,178	229 8 0	386 2 2	468 0 2				
		Total	7,478 9 2	8	1,152	40	4,800	8	864	6	504			7,320	371 7 0	1,519 0 2	1,147 9 2				
3	Jansath.	Bhūtkarheri	4,128 1 10	6	864	17	2,040	4	432	3	252			3,528	179 14 2	775 0 0					
4		Jauli Jansath	4,172 0 0	2	388	22	2,640	4	432	2	168			3,528	90 0 0	721 8 0					
5		Khāteuli	3,400 7 2	4	576	26	2,120	6	648	4	336			4,680	247 5 7	667 12 9					
6		Bhūmah Sambalberah...	2,945 9 8	4	576	17	2,040	5	540	...	...			3,156	440 1 8	229 11 4			
		Total		18	2,304	82	9,640	19	2,052	9	756			14,952	947 5 6	2,697 0 1					
		Grand Total		26	2,486	122	14,640	27	2,916	15	1,260			22,272	1,216 12 5	4,216 0 2					

15. The number of records filed in the Collector's office and prepared for the use of the patwāris was as follows :—

Number of records filed.

Name of pargana.	Map.	Khasra.	Jama- bandi.	Khewat.	Wajibul- arz.
Pūr Chapār ... { 55 villages ... } 59 mahāls ... }	165	177	177	177	177
Muzaffarnagar ... { 64 villages ... } 73 mahāls ... }	192	219	219	219	219
Bhūkarheri ... { 50 villages ... } 54 mahāls ... }	150	162	162	162	162
Khātawāl ... { 88 villages ... } 104 mahāls ... }	264	312	312	312	312
Bhūmah Sambalherah ... { 41 villages ... } 59 mahāls ... }	126	177	177	177	177
Jauli Jānsath ... { 68 villages ... } 71 mahāls ... }	189	213	213	213	213
Total of six parganas { 381 villages ... } 420 mahāls ... }	1,086	1,260	1,260	1,260	1,260

16. The revision of the settlement of the Ganges Canal tract began on my return from privilege leave early in August, 1870, but little could be done until the cold weather. Munshi Gursaran Das came to the district as Settlement Deputy Collector in April, 1871, and remained at work up to the 16th January, 1875. I left the district on furlough on the 6th April, 1874, and returned to it for only a few days at the close of the year.

Duration of settlement operations.

The revision of the settlement in this way occupied a settlement officer for three years and eight months and a Settlement Deputy Collector for three years and nine months.

17. The cost of settlement was as follows :—

Cost of settlement.

						Rs.
1870-71	...	...	...	...	...	30,095
1871-72	...	...	...	...	...	37,389
1872-73	...	...	...	...	...	42,047
1873-74	...	...	...	...	...	41,168
1874-75	...	...	...	...	...	6,253
Total	...	...	...	...	...	1,56,972

The heads under which the expenditure was incurred were—

Officers' salaries.	Salaries of fixed establishment.	Salaries of variable establishment.	Muskuris.	Travelling charges of officers.	Travelling charges of establishment.	Contingent charges.	Job work.	Purchase of instruments.	Stationary.	Total.
Rs.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs.	Rs.	Rs. a. p.	Rs. a. p.
62,857	13,839 10 0	50,238 14 3	1,695 10 2	3,444 14 7	533 7 4	11,190 3 6	9,341	318	3,284 15 4	1,56,972 11 2

The total cost of settlement was very considerable, being Rs. 275-14-0 per square mile of the total area of the tract, and amounting to more than one and a half year's value of the increment to the land revenue obtained by the revision.

But over and above the regular settlement of the upland watered by the Ganges Canal, a considerable number of more or less summary settlements were undertaken by the settlement officer and his establishment.

And latterly 45 villages in parganas Gordhanpur and Pūr Chapār were settled annually in the manner described in the memorandum on the subject which forms appendix XIII. These summary settlements entailed the more or less thorough inspection of each estate once and often twice every year.

The khádir portions of parganas Bhúkarheri and Bhúmáh Sambalherah were also carefully inspected in the cold weather of 1872-73, and alterations in the assessment were made on the basis of khasras compiled and tested with great care, as far as the soil and crop entries were concerned.

To the area settled on the upland, therefore, amounting to 364,057 acres, must in this way be added:

36,595	"	in Gordhanpur.
3,310	"	in Púr Chapár.
7,571	"	in Bhúkarheri.
21,059	"	in Bhúmáh Sambalherah.

Total 422,592 acres

Work of subordinate officers.

18. With the work done by Munshi Gursaran Das I was quite satisfied. Appeals were few and the result was favourable to the Deputy Collector; and I am confident that the bulk of his work, such as attestation, distribution of revenue, adjustment of rent-rolls, was performed laboriously and accurately, and that he endeavoured with success to do justice to all classes of the community. Ashfaq Husen, Sadr Munsarim, did good work throughout the settlement, and I feel the more bound to notice him that, owing to the fact that the Meerut Settlement Report was not completed by Mr. Forbes, no permanent record was made of his services with reference to that district, from which he came with the highest testimonials. And no less worthy of mention is Munshi Jai Singh Rai, Sharishtadar, who proved himself to be a thoroughly accurate, painstaking, and trustworthy official, upon whom as well as upon my present head-clerk, Pandit Jia Lal, has devolved no small amount of labour in connection with this report since settlement operations in the district were brought to a close.

ALAN CADELL,
Late Settlement Officer of Muzaffarnagar.

A P P E N D I C E S.

TABLE I

Comparison of the Proposed Method with Other Methods

Method	Accuracy (%)	Computational Time (s)
Proposed Method	98.5	0.5
Other Methods	97.2	1.2

(iii)
APPENDIX I.

*Abstract statement of the number of each caste in 1872 in the six parganas of the
Muzaffarnagar district, the settlement of which has been revised.*

No.	Name of caste.	HINDUS.			MUSALMANS.			Grand total.	Remarks.
		Men.	Women.	Total.	Men.	Women.	Total.		
1	Europeans ...	...	...	...	...	...	...	7	
	Males ... 4	...	...	...	...	...	...
	Females ... 3	...	...	...	...	...	...
	7	...	...	...	...	...	...
2	Achhraj ...	56	57	123	...	...	...	123	
3	Ahír ...	301	167	368	...	...	...	368	
4	Bádi ...	203	178	381	14	5	19	400	
5	Barwe ...	6	6	12	...	...	...	12	
6	Bahlím ...	...	...	...	176	100	276	276	
7	Bairáji ...	116	48	164	...	...	...	164	
8	Banjára ...	966	673	1,639	36	35	71	1,710	
9	Beora ...	116	98	214	...	...	...	214	
10	Bisáti ...	59	84	143	20	17	37	180	
11	Bishnoi ...	27	31	58	...	...	...	58	
12	Biloch ...	...	...	...	3	1	4	4	
13	Bhát ...	306	215	521	11	9	20	541	
14	Bhatyára ...	...	...	...	182	155	337	337	
15	Bharbhunja ...	297	257	554	...	...	...	554	
16	Brahman ...	6,064	4,524	10,588	...	...	...	10,588	
17	Brahmachási ...	2	2	4	...	...	...	4	
18	Bhangí ...	4,076	3,664	7,740	...	...	...	7,740	
19	Barhi ...	2,283	1,615	3,898	308	249	557	4,556	
20	Chauhán ...	2,283	1,890	4,173	8	4	12	4,185	
21	Chónagas ...	...	...	...	26	24	50	50	
22	Chhipí ...	144	135	279	9	5	14	293	
23	Chamási ...	22,363	19,957	42,320	...	...	...	42,320	
24	Darzi ...	204	163	367	359	279	638	1,005	
25	Dakot ...	177	128	305	...	...	...	305	
26	Dogar ...	7	6	13	7	7	14	27	
27	Dhobi ...	106	42	147	904	840	1,744	1,891	
28	Fakír ...	381	181	562	476	398	874	1,436	
29	Gara ...	...	...	...	2,256	2,204	4,460	4,460	
30	Gadarya ...	2,591	2,274	4,865	75	75	150	5,015	
31	Gidhi ...	...	...	...	29	20	49	49	
32	Gorakha ...	2	...	2	...	...	...	2	
33	Gujráti ...	37	29	66	...	...	...	66	
34	Gújar ...	6,540	4,570	11,110	...	...	...	11,110	
35	Gosháin ...	142	62	204	...	...	...	204	
36	Ghosal ...	...	...	...	110	108	218	218	
37	Hijre ...	...	...	...	11	3	14	14	
38	Hosi ...	60	50	110	...	...	...	110	
39	Halwál ...	...	...	...	389	391	780	780	
40	Ját ...	10,266	7,246	17,512	366	365	731	18,243	
41	Jakhiára ...	...	...	...	3	4	7	7	
42	Jogi ...	1,785	1,191	2,976	141	135	276	3,252	
43	Jogisáda ...	...	...	...	14	12	26	26	
44	Jhojha ...	...	...	...	3,247	2,263	5,510	5,510	
45	Juláha ...	548	481	1,029	5,286	4,655	9,941	10,970	
46	Kharáti ...	...	...	...	2	3	5	5	
47	Khumsa ...	...	...	...	39	39	78	78	
48	Káchhú ...	5	7	12	...	...	...	12	
49	Káyoti ...	184	121	305	...	...	...	305	
50	Kashmiri ...	...	...	...	1	...	1	1	
51	Kalal ...	400	387	787	...	...	...	787	
52	Kamboh ...	244	165	409	...	...	...	409	
53	Kumbhar ...	2,481	2,219	4,650	19	29	48	4,698	
54	Kanjar ...	184	117	301	11	2	13	314	
55	Kanchan ...	...	...	...	24	31	55	55	
56	Kosi ...	45	35	80	...	...	...	80	
57	Kumá ...	28	28	56	...	...	...	56	
58	Kunjra ...	...	...	...	186	137	323	323	

APPENDIX I.

Abstract statement of the number of each caste in 1872 in the six parganas of the Muzaffarnagar district, the settlement of which has been revised—(concluded.)

No	Name of caste.	HINDUS.			MUSALMANS.			Grand total	Remarks
		Men.	Women.	Total.	Men.	Women.	Total.		
59	Koli	1	...	1	...	...	...	1	
60	Kusegar	15	12	27	29	25	54	81	
61	Kahár	4,631	4,316	8,947	...	...	...	8,947	
62	Khatrí	87	84	171	...	...	...	171	
63	Khatík	506	475	981	...	...	...	981	
64	Lohár	447	317	764	597	543	1,140	1,904	
65	Lodh	25	23	48	...	...	...	48	
66	Máíl	579	638	1,217	...	...	...	1,217	
67	Memár	66	53	119	2	...	2	121	
68	Mughal	...	...	...	152	156	308	308	
69	Manihár	...	...	...	99	87	186	186	
70	Mallah	17	8	25	33	35	68	83	
71	Mulla	...	...	...	2	...	2	2	
72	Mahájan	7,697	6,170	13,867	...	...	...	13,867	
73	Mahájan Retl	21	16	37	...	...	...	37	
74	Mirási	...	...	...	250	233	483	483	
75	Meo	...	...	...	184	128	312	312	
76	Mewátl	17	16	33	...	...	...	33	
77	Mochi	28	25	53	5	5	10	63	
78	Nái	1,164	1,121	2,285	1,264	1,224	2,488	4,773	
79	Naddáf	...	...	...	452	395	847	847	
80	Naqqál	...	...	...	3	2	5	5	
81	Oar	1	...	1	...	...	...	1	
82	Pathám	...	...	...	1,707	1,329	3,036	3,036	
83	Piráda	...	...	...	35	31	66	66	
84	Patwe	25	19	44	...	...	...	44	
85	Pazáwagar	...	...	...	7	6	13	13	
86	Piráhi	...	...	...	26	32	68	68	
87	Purbia	98	69	167	...	...	...	167	
88	Qassáb	...	...	...	2,402	2,292	4,695	4,695	
89	Rajput	2,134	1,950	4,084	1,333	1,022	2,355	6,439	
90	Rána	...	...	...	240	239	479	479	
91	Rangrez	...	...	...	422	403	825	825	
92	Ráwa	1,778	1,665	3,443	...	...	...	3,443	
93	Rain	...	...	...	26	20	46	46	
94	Rod	2	2	4	40	20	70	74	
95	Richhbande	...	...	...	15	11	26	26	
96	Raidási	2	1	3	...	...	...	3	
97	Rangsás	...	...	...	15	13	28	28	
98	Rádh	1	...	1	...	...	...	1	
99	Sonár	729	666	1,395	...	...	...	1,395	
100	Sáni	5,917	4,629	10,546	...	...	...	10,546	
101	Shutresháhi	4	2	6	...	...	...	6	
102	Salvad	...	...	...	4,246	3,583	7,829	7,829	
103	Saqa	...	...	...	1,080	850	1,930	1,930	
104	Sikh	7	...	7	...	...	...	7	
105	Shekh	...	...	...	2,916	2,449	5,365	5,365	
106	Shekh Naqqárchí	...	...	...	226	187	413	413	
107	Shorágar	...	...	...	10	8	18	18	
108	Shafálgar	...	...	...	24	24	48	48	
109	Tawáif	...	2	2	104	88	190	192	
110	Taga	3,429	2,201	5,630	855	790	1,645	7,275	
111	Tamoli	53	41	94	...	...	...	94	
112	Tirgar	...	...	...	74	58	132	132	
113	Thákur	13	12	25	...	...	...	25	
114	Thathere	50	28	78	...	...	...	78	
115	Teli	...	...	...	1,953	1,575	3,528	3,528	
Total		95,396	77,768	173,164	37,586	32,667	70,253	243,417	

APPENDIX II.

Statement showing tenure of cultivation.

Number.	Name of pargana.	Number of revenue paying estates.	CULTIVATION BY PROPRIETORS.									
			AREA CULTIVATED BY PROPRIETORS AS SUCH.									
			Area under cultivation.			Average area per head.		Rent.			Average rent per head.	
			Resident.	Non-resident.	Total.	Resident.	Non-resident.	Total.	Resident.	Non-resident.	Resident.	Non-resident.
						A. r. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1	Pār Chapr	57	15,385	2,232	17,617	10 2 28	57,546 0 6	6,357 10 0	63,903 10 6	38 8 9	3 11 6	3 13 7
2	Muzaffarnagar	67	6,336	2,210	8,546	9 0 29	20,256 12 6	5,337 3 6	25,594 0 0	27 5 6	3 2 11	2 6 8
3	Bhākarheri	53	6,294	719	7,013	12 0 28	20,160 14 0	845 11 9	21,006 9 9	26 7 6	3 3 3	1 2 10
4	Jauli Jānsath	71	6,870	...	6,870	17-2-31	9,010 11 0	...	9 010 11 0	25-0-6	1 6 8	...
5	Khātauli	97	7,346	1,137	8,483	10 0 23	28,608 0 0	3,151 8 9	31,757 8 9	38 3 5	3 14 4	2 12 4
6	Bhūmah Sambalherah	59	4,309	1,347	5,656	20 1 39	7,350 11 6	3,175 5 3	10,426 0 9	37 12 5	1 10 11	2 5 9
	Total	404	46,090	7,645	53,735	11 2 17	1,42,531 1 6	18,867 7 3	1,61,398 8 9	34 12 10	3 1 6	2 7 6

APPENDIX II.

Statement showing tenure of cultivation—(continued).

Number.	Name of pargana.	Number of revenue-paying estates.	Number of proprietors.	1	2	A. r. p.	Ra. a. p.	Ra. a. p.	Ra. a. p.	Ra. a. p.	Ra. a. p.	Ra. a. p.
1	Pâr Chapâr	67	198	624	22	706	3 2 11	9,492 5 6	120 7 0	2,612 12 6	13 3 3	3 10 4
2	Musaffarnagar	67	73	397	29	426	5 3 13	968 10 6	96 0 6	1,064 11 0	14 9 4	2 7 6
3	Bhâkarheri	53	63	309	9	317	6 0 5	1,169 14 0	45 0 0	1,214 14 0	19 4 4	3 12 9
4	Janli Jânath	71	55	156	...	166	2-2-14	450 0 0	...	430 0 0	7-13-1	2 12 1
5	Khâstaul	97	53	80	...	80	1 2-1	422 1 0	...	422 1 0	7-15-5	5 4 5
6	Bhûmah Sambalherah	59	8	51	89	140	17 3 0	391 1 0	146 0 6	339 1 6	42 6 2	3 11 11
	Total	404	480	1,676	149	1,815	4 0 9	5,674 0 0	409 3 0	6,083 0 0	13 3 4	3 6 2
												2 12 0

APPENDIX II.

Statement showing tenure of cultivation—(continued).

CULTIVATION BY PROPRIETORS.													
AREA UNDER CULTIVATION OF PROPRIETOR AS IN THE CAPACITY OF TENANTS-AT-WILL.													
Number.	Name of pargana	Number of revenue paying estates.	Number of proprietors.	Area under cultivation.			Average area per head.		Rent.		Total.	Average rent per head.	
				Resident.	Non-resident.	Total.	Resident.	Non-resident.	Resident.	Non-resident.		Resident.	Non-resident.
1	Fúr Chapár	57	263	763	49	812	3 0 14	3 0 14	2,510 9 6	105 15 0	Rs. a. p. 2,620 8 6	9 15 5	Rs. a. p. 3 4 8
2	Musafernagar	67	128	455	32	487	3 3 10	3 3 10	1,329 10 6	204 1 6	1,536 12 0	11 14 10	2 14 6
3	Bhúkarheri	53	54	154	...	154	2 3 16	2 3 16	460 8 9	...	460 8 9	8 8 6	2 15 10
4	Jauli Jánath	71	62	247	...	247	3-3-37	...	1,053 4 6	...	1,053 4 6	16 15 10	4 4 3
5	Khátanli	97	101	179	50	229	2 1 3	2 1 3	554 2 3	85 12 0	639 14 3	6 5 4	3 1 6
6	Bhámab Sambalherah	59	26	92	72	164	6 1 9	6 1 9	276 14 0	139 12 3	416 10 3	16 9 5	3 0 2
	Total	404	634	1,890	203	2,093	3 1 8	3 1 8	6,178 1 6	539 8 9	6,717 10 3	10 9 6	3 4 4
													2 10 6

APPENDIX II

Statement showing tenure of cultivation—(continued).

Number.	Name of pargana.	Number of revenue paying estates.			A. r. p.	Ra. a. p.	Ra. a. p.	Ra. a. p.	Ra. a. p.	Ra. a. p.	Ra. a. p.	Ra. a. p.
1	Púr Chapár	57	1,650	16,932	2,303	19,125	11 2 15	62,246 15 6	6,583 0 0	66,836 15 6	41 11 6	3 11 2 2 13 9
2	Musaferriagar	67	936	7,228	2,271	9,509	10 0 25	22,548 1 6	5,627 5 6	28,185 7 0	30 31 5	3 1 10 2 7 9
3	Bhúkarberí	53	576	6,756	728	7,484	12 3 39	21,791 4 9	890 11 9	22,682 0 6	39 6 1	3 3 7 1 3 7
4	Jauli Jánath	71	360	6,773	...	6,773	16-3-10	10,492 0 0	...	10,492 0 0	39 2 5	1 3 9
5	Khátaili	97	631	7,406	1,187	8,792	10 3 13	29,692 2 2	2,237 4 9	39,919 8 0	39 7 11	3 14 3 2 11 8
6	Bhómah Sambalherab	59	276	4,453	1,508	5,960	21 2 15	7,718 10 6	2,463 2 0	11,181 12 6	40 2 2	1 31 9 2 4 2
	Total	404	4,629	49,856	7,997	57,853	12 1 23	1,51,328 2 0	19,816 2 0	1,74,199 11 0	37 10 1	3 1 9 2 7 8

APPENDIX II.

Statement showing tenure of cultivation—(continued).

CULTIVATION BY OCCUPANCY TENANTS.															
HEREDITARY.															
Number.	Name of pargana.	Number of revenue paying estates.	Number of cultivators.	Area under cultivation.			Average area per head.		Rent.			Average rent per head.		Average rate per acre.	
				Resident.	Non-resident.	Total.	Resident.	Non-resident.	Total.	Resident.	Non-resident.	Total.	Resident.	Non-resident.	
1	Fār Chapār	...	67	1,438	11,336	2,305	13,641	A. r. p. 9 1 38	Rs. a. p. 34,316 5 3	Rs. a. p. 6,590 12 0	Rs. a. p. 40,907 1 3	Rs. a. p. 28 7 2	Rs. a. p. 3 0 5	Rs. a. p. 2 13 9	
2	Muzāfarnagar	...	67	2,766	18,013	3,124	21,137	7 3 10	74,575 14 9	12,932 6 3	87,508 5 0	32 5 5	4 2 3	4 2 3	
3	Bhūkarheri	...	53	1,741	22,209	4,541	26,750	15 1 18	72,180 0 9	14,121 9 9	86,301 10 6	49 9 1	3 4 0	3 1 9	
4	Jauli Jānsath	...	71	2,473	23,255	4,728	27,983	11 1 10	89,180 4 6	17,399 12 6	1,06,580 1 0	43 1 7	3 13 4	3 10 11	
5	Khātauli	...	97	2,430	17,259	3,253	20,512	8 0 26	52,016 2 9	13,993 0 3	66,009 3 0	39 10 9	4 12 0	4 4 10	
6	Bhūmah Sambalherab	...	59	1,647	14,969	4,486	19,455	11 3 10	41,833 14 0	11,008 12 6	52,842 10 6	32 1 4	2 12 9	3 3 8	
	Total	...	404	12,425	107,011	22,437	129,478	10 1 27	3,94,102 10 0	76,046 5 3	4,70,148 15 3	37 13 5	3 10 11	3 6 3	

APPENDIX II.

Statement showing tenure of cultivation—(continued).

CULTIVATION BY OCCUPANCY TENANTS.															
AREA HELD IN THE CAPACITY OF TENANTS-AT-WILL BY PERSONS WHO ARE OCCUPANCY TENANTS OF OTHER LAND.															
Number.	Name of pargana.	Number of revenue paying estates.	Number of cultivators.	Area under cultivation.			Average area per head.		Rent.			Average rent per head.		Average rate per acre.	
				Resident.	Non-resident.	Total.	Resident.	Non-resident.	Total.	Resident.	Non-resident.	Resident.	Non-resident.		
1	Púr Chapár	...	400	1,837	476	2,303	A. r. p. 5 3 1	Rs. a. p. 4,853 12 0	Rs. a. p. 1,178 13 0	Rs. a. p. 6,032 9 0	Rs. a. p. 15 1 1	Rs. a. p. 2 10 7	Rs. a. p. 2 7 7	Rs. a. p. 2 7 7	
2	Muzaffarnagar	...	776	3,832	929	4,261	5 2 0	6,765 9 6	3,325 3 0	10,090 12 6	13 0 1	2 0 6	3 9 3	3 9 3	
3	Bhúkarheri	...	306	1,577	372	1,949	6 1 19	4,243 0 9	1,182 4 3	5,425 5 0	17 11 8	2 11 1	3 2 1	3 2 1	
4	Jauli Jásnath	...	623	3,459	971	6,430	10 1 11	16,303 1 3	3,218 6 6	19,551 7 9	31 6 1	2 15 7	3 5 6	3 5 6	
5	Khátauli	...	431	1,838	361	2,199	5 0 16	7,825 4 0	1,597 4 9	9,422 8 9	21 12 10	4 4 1	4 6 10	4 6 10	
6	Bhúmah Sambalherah	...	471	2,056	761	2,817	5 3 27	5,682 9 0	2,201 7 9	7,884 0 9	16 11 10	2 12 3	2 14 3	2 14 3	
	Total	...	3,007	16,089	3,870	19,939	6 2 22	45,473 4 6	12,733 7 3	58,406 11 9	19 6 0	2 12 5	3 4 8	3 4 8	

APPENDIX II.

Statement showing tenure of cultivation—(continued).

CULTIVATION BY OCCUPANCY TENANTS.														
TOTAL.														
Number.	Name of pargana.	Number of revenue paying estates.	Area under cultivation.			Average area per head.		Rent.			Average rent per hect.		Average rate per acre.	
			Cultivators.	Resident.	Non-resident.	Total.	Resident.	Non-resident.	Total.	Resident.	Non-resident.	Resident.	Non-resident.	
1	Púr Chapár	...	1,438	13,163	2,781	15,944	A. r. p. 11 0 14	Rs. a. p. 39,170 1 3	Rs. a. p. 7,789 9 0	Rs. a. p. 46,959 10 3	Rs. a. p. 32 10 3	Rs. a. p. 2 15 7	Rs. a. p. 2 12 8	
2	Musafarnagar	...	2,706	21,345	4,063	25,398	9 1 2	81,341 8 3	16,237 9 3	97,529 1 6	36 1 1	3 13 0	4 0 2	
3	Bhúkarheri	...	1,741	23,786	4,913	28,699	16 1 37	76,428 1 6	15,303 14 0	91,726 15 6	52 11 0	3 3 4	3 1 10	
4	Jauli Jānēth	...	2,473	28,714	5,699	34,413	13 3 26	1,05,483 5 9	20,648 3 0	1,26,131 8 9	51 0 1	3 10 9	3 7 6	
5	Khātauli	...	2,420	19,097	3,614	22,711	9 1 22	89,841 6 9	15,590 5 0	1,05,431 11 9	43 9 1	4 11 3	4 5 2	
6	Bhāmāh Sambalherāh	...	1,647	17,025	5,247	22,272	13 2 4	47,516 7 0	13,310 4 3	60,726 11 3	36 13 11	2 12 8	2 8 10	
	Total	...	12,425	123,130	26,307	149,437	12 0 4	4,39,775 14 6	88,779 12 6	5,29,555 11 0	43 2 11	3 9 2	3 6 0	

APPENDIX II.

Statement showing tenure of cultivation—(concluded).

Number.	Name of pargana.	Number of revenue paying estates.	TOTAL AREA.									
			TOTAL AREA CULTIVATED BY PROPRIETORS, OCCUPANCY TENANTS, AND TENANTS-AT-WILL.									
			Area under cultivation.			Average area per head.		Rent.		Total.	Average rent per head.	
			Cultivators.	Resident.	Non-resident.	Total.	Resident.	Non-resident.	Total.		Resident.	Non-resident.
				Resident.	Non-resident.	Total.	A. r. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1	Púr Chapár	57	4,024	31,472	8,957	42,429	10 3 26	1,12,654 15 3	22,194 15 0	1,34,849 14 3	33 8 3	3 5 10
2	Muzaffarnagar	67	5,288	35,976	10,793	46,598	8 3 9	1,25,506 14 9	34,214 10 0	1,59,721 8 9	30 0 7	3 8 1
3	Bhúkarheri	53	3,506	36,956	9,315	46,271	13 0 13	1,16,380 9 3	27,697 10 0	1,44,078 3 3	41 1 6	3 2 5
4	Jauli Jánasath	71	3,711	41,339	9,052	50,391	13 2 13	1,33,237 9 6	28,512 15 3	1,61,750 8 9	43 9 5	3 2 7
5	Khástanli	97	4,563	34,528	7,593	43,221	9 1 0	1,49,698 11 6	29,379 8 6	1,79,078 4 0	39 3 11	4 5 4
6	Bhúmah Sambalherah...	59	2,670	26,185	10,414	36,599	13 2 30	62,839 10 6	24,714 10 3	87,554 4 9	32 12 8	2 6 5
	Total	404	23,763	208,286	56,223	264,509	11 0 26	7,00,318 6 9	1,66,714 5 6	8,67,032 11 9	36 7 10	3 5 8
												2 15 5

APPENDIX IIA.

Abstract statement of cultivating holdings.

CULTIVATION BY TENANTS-AT-WILL.			TOTAL.		
Number.	Amount of land held.	Average area per head.	Number.	Amount of land held.	Average area per head.
270	10,916	40.8	4,429	34,139	7.235
3,180	11,725	3.230	6,468	41,103	6.117
936	7,350	7.316	4,024	42,439	10.27
263	812	3.014			
400	2,303	5.31			
1,599	10,465	...			
4,121	25,315	6.023	5,179	39,990	7.237
8,323	15,982	4.310	6,411	41,917	6.26
1,646	11,691	7.016	5,266	46,598	8.310
126	497	3.31			
776	4,961	5.90			
2,550	16,439	...			
By proprietors in the capacity of tenants-at-will.					
By occupancy tenants in the capacity of tenants-at-will.					
Total					

Mr. Thornton's settlement " Martin's ditto ... Present revision	293	5,763	19 3 0	784	9,743	12 2 0	2,491	25,955	10 1 27	3,568	41,460	11 2 19
	713	6,706	9 1 25	3,077	26,071	6 1 36	3,338	14,087	4 0 35	6,828	46,364	7 0 11
	576	7,013	12 0 28	1,741	26,760	16 1 18	1,189	10,088	8 1 37	3,506	46,771	13 0 32
	By proprietor's in the capacity of occupancy tenants.			63	317	6 0 6						
	Total ...			1,804	27,067	...						
Mr. Thornton's settlement " Martin's ditto ... Present revision	293	7,087	31 3 28	313	2,870	12 1 18	2,791	37,149	13 1 9	3,326	48,106	14 1 34
	481	6,642	13 3 9	3,461	25,030	7 1 0	4,051	17,071	4 0 34	7,993	48,763	6 0 16
	360	6,370	17 2 31	2,473	27,983	11 1 10	878	9,206	10 1 37	3,711	50,391	13 2 13
	By proprietors in the capacity of occupancy tenants.			55	156	2 3 14						
	Total ...			2,528	28,139	...						
Mr. Thornton's settlement " Martin's ditto ... Present revision	705	7,790	11 0 8	733	8,833	12 0 10	2,724	29,883	8 1 24	4,161	39,506	9 1 39
	1,107	8,688	7 3 1	2,253	19,566	6 0 3	3,163	12,217	3 3 18	7,421	40,370	5 1 19
	831	8,483	10 0 33	2,420	20,512	8 1 36	1,312	10,718	8 0 37	4,563	42,321	9 1 0
	By proprietors in the capacity of occupancy tenants.			53	80	1 2 1						
	Total ...			2,473	30,593	...						
Mr. Thornton's settlement " Martin's ditto ... Present revision	705	7,790	11 0 8	733	8,833	12 0 10	2,724	29,883	8 1 24	4,161	39,506	9 1 39
	1,107	8,688	7 3 1	2,253	19,566	6 0 3	3,163	12,217	3 3 18	7,421	40,370	5 1 19
	831	8,483	10 0 33	2,420	20,512	8 1 36	1,312	10,718	8 0 37	4,563	42,321	9 1 0
	By proprietors in the capacity of occupancy tenants.			53	80	1 2 1						
	Total ...			2,473	30,593	...						
Mr. Thornton's settlement " Martin's ditto ... Present revision	705	7,790	11 0 8	733	8,833	12 0 10	2,724	29,883	8 1 24	4,161	39,506	9 1 39
	1,107	8,688	7 3 1	2,253	19,566	6 0 3	3,163	12,217	3 3 18	7,421	40,370	5 1 19
	831	8,483	10 0 33	2,420	20,512	8 1 36	1,312	10,718	8 0 37	4,563	42,321	9 1 0
	By proprietors in the capacity of occupancy tenants.			53	80	1 2 1						
	Total ...			2,473	30,593	...						
Mr. Thornton's settlement " Martin's ditto ... Present revision	705	7,790	11 0 8	733	8,833	12 0 10	2,724	29,883	8 1 24	4,161	39,506	9 1 39
	1,107	8,688	7 3 1	2,253	19,566	6 0 3	3,163	12,217	3 3 18	7,421	40,370	5 1 19
	831	8,483	10 0 33	2,420	20,512	8 1 36	1,312	10,718	8 0 37	4,563	42,321	9 1 0
	By proprietors in the capacity of occupancy tenants.			53	80	1 2 1						
	Total ...			2,473	30,593	...						

БРОКЕРСТВО

JAVIS JAMES

KRAVITS

APPENDIX III.

MR. CAVENDISH'S notes regarding villages in *Púr Chapár*, compared with the statistics of the settlement just completed.

STATISTICS OF 1825.

1. The first village Barlah, pargana Nurnagar, contains about 4,462 bigahs of 2,916 yards, of which 3,874 are cultivated or prepared for culture and 18 fallow.

STATISTICS OF 1872.

Barlah in the dismemberment of the old Nurnagar pargana was included in *Púr Chapár*, to which it naturally belongs, as it is situated about half-way between the two towns on the northern and southern boundaries, from which the pargana takes its name. The areas given by Mr. Cavendish are in the district bigah somewhat less than half an acre, which, if a new and clumsy land measure had not been devised for official use in certain districts and in the Canal Department, would have been almost universal in the Upper Duáb.

The areas in acres for 1825 and 1872 are as follows :—

			1825.	1872.
Cultivated	...	...	1,980	1,902
Culturable	...	...	9	145
Barren waste	...	...	263	237
			<hr/> 2,252	<hr/> 2,284
			—	—

Notwithstanding the construction of a metalled road and of two rajbahs through the village lands, the area of barren waste has been lessened. The culturable waste, on the other hand, has increased, partly owing to the multiplication of groves, almost unknown before in this tract, and partly owing to the inclusion in this area of some not very profitable land, from which earth has been excavated for the rajbahs.

2. It is stated to be possessed by 215 cultivating zemindars, of a race denominated Tagas, in whom Mr. Cavendish appears to consider the absolute property of the soil to be vested.

The resident Tagas of the *Bikwán gót* do not claim an earlier settlement in the district than in the eleventh century, when they migrated from *Bikánir*. Their village, like the rest of the pargana, came into the hands of the Sayyids in the later days of the empire; but the hold of the Sayyids was never very firm, and their rights, as far as this estate is concerned, were held to have been cancelled by the subsequent usurpation of the *Gújar Rája* of *Landhaurah*. On the *Rája's* death in 1813, the village was settled with the village community. The village had afterwards to fight against the farm of Captain *Shekh Kallan* (see *Selections from Revenue*

3. They are divided into five pattis or branches, all descended from the same ancestors, Hindus, though now some profess the Moslem faith, with little apparent variety in religious belief or practice.

4. Inheritance is stated to be confined to sons who share equally if of the same mother; but if of different mothers, then by a double partition, equal aggregate shares being first given to each family, then equal portions of these shares to the sons of each; females excepting as being entitled to a maintenance, are said to have no right of inheritance.

5. The share to which each parcener is entitled is said to be recorded by the village Bhat or Bard.

6. The quantity of land occupied by each parcener appears to depend on his means of cultivating it. The actual state of possession differs greatly from the distribution of property recognized as the hereditary right of the parties, which is detailed minutely to the 160,000th part of the bigah. Each of the pattis are stated to own four biswas, but the quantity of land occupied by each is not quite equal, and it appears to be doubtful whether either party be entitled to claim a fresh partition.

7. The parceners who are absent in service, and have consequently no lands, will, it is said, obtain a share on their return.

Records of 1873, page 269), and until the canal was opened the unity and resources of the community must have been severely tested by high assessments and constantly recurring droughts.

There are now 320 owners, all Tagas except two Baniyas, who own 11 acres; 3 Beorahs, owning 24 acres, 4 sonars, 20 acres; 12 Brahmans, 28 acres. Mahomedan Tagas own 201 acres of the land in two pattis. The ancestors of the Mahomedans were converted in Humayun's time, but in this as in very many non-Muslim communities, any very decided Mahomedanism is of quite recent date, and in these communities Islam may certainly boast of a revival.

The rules of inheritance continue the same as far as the Hindus are concerned, the Mahomedan members of the community, too, still follow the ancient custom, but they acknowledge that the first female who sues for her share must eventually get it. When this happens the Mahomedan patti cannot be expected to hold together, and no custom, however ancient, is allowed by our courts to overrule the Mahomedan law. It seems almost inevitable that the provision of the law opposed to all ancient customs will contribute as much to the ruin of these communities as it unquestionably has done to the decay of the once great Sayyid houses in this district.

The entries are still made here as elsewhere, but the Bhat's pushtak has lost its old authority.

Questions of ownership have now been finally settled, and it would be impossible now-a-days to urge claims derived from remote ancestors.

Absentees obtain according to village custom their shares on their return without any account of profit and loss. But now-a-days when profits are invariable, the old class of Mafrur is unknown. A man away from the village in service retains his share, which is no longer a mere

8. The *malguzars* or *lambardars*, that is, the managers of the village from whom the revenue is received, are the headmen of the *pattis*.

The office of *lambardar* appears to be

Note.—The people are said to have disused the term *mukaddam*, because they think the English consider a person so designated to be a headman, having no proprietary rights.

generally inherited by the eldest son; but the right of succession is not absolute, being set aside in case of incapacity. The *lambardars* appear to be by no means distinguished by the extent of the parcenary share of which they are the acknowledged proprietors. It is said that they used to receive from the *mukarraridar* five per cent. on the *jama* for managing the village, besides having their garden lands free and receiving presents. Mr. Cavendish appears to think that the *malikana* (meaning by the term the perquisites of management) should be fixed by Government, but levied by the managers as rent. He distinguishes it from the *zemin-dari rasûm* or proprietary allowance, generally five per cent., receivable by *zemin-dars*, whether in or out of the management from the cultivators of other classes. The *malikana*, he observes, used under native Governments to be collected by the Government officers, and paid to managers out of the treasury. This plan Mr. Fortescue is said to have ordered to be followed in Delhi, though there the word *malikana* was not known. In many villages, he observes, the headmen have made themselves farmers, that is levying the full Government share of the produce, and setting aside the right of their parceners to have a proportionate distribution of the assessed *jama*, they have taken to themselves all the profit and loss on the engagement. This has also occurred in Delhi, where the *mukaddams* have been supported by powerful men.

9. In the village in question, the weight of the Government assessment appears to have levelled all distinctions. Even the deduction of 10 per cent. nominally made

right to cultivate, but a distinct property bringing certain profits.

The term *mukaddam* is now only applied to the chief men of a non-proprietary community. The *lambardars* of this village are called *Chandhris*, a title not very common in this neighbourhood, *Padhân*, being generally used among *Jâts* and *Gújars*.

The custom of succession remains theoretically unchanged, but the right of the many to a voice in the choice of their representatives has been admitted in *Barlah* as elsewhere since 1825. The *lambardars* now collect the five per cent. allowance fixed by Government. Even now they do not in all villages get the allowance, but the headmen of a Hindu village on the high road to *Hardwâr* have many expenses.

This appears to have been the case generally in this neighbourhood, and it tended to the development of a peculiarly strong occupancy title, which is now how-

from the estimated assets has gone merely to lower the rate at which land is occupied by the cultivators of all classes. With the exception of some trifling perquisites to be noticed thereafter, the managers (lambardars) appear to derive little or no avowed advantage from the post, excepting what they can contrive to embezzle under the name of village expenses, and neither they nor their coparceners receive any zemindari rasm from the other cultivators. Some of these are said to have resided in the village for some hundred years, and to have cultivated the lands occupied by them for 30 or 50 years, and who are therefore included by Mr. Cavendish in the class of maurusi or hereditary ryots (asamis). They are said to possess no rights beyond the year for which they commence the cultivation, having no pattahs, and the zemindars being entitled to oust them at pleasure on the expiration of the year. But, as above observed, all hold at the same rates, the Government demand, leaving no rent properly so called to any individual.

10. Although however, a high assessment has thus broken down distinctions of rank, it would appear from the statements prepared by the native officers, the zemindars, and Mr. Cavendish, to be his opinion and (seemingly) the general sentiment of the people, that the managers are entitled in the adjustment of their rent to be distinguished from their brethren and from non-proprietary ryots, and that the village proprietors should have better terms than the ryots. Thus the kanungos state, the Government share from land cultivated by the lambardars at one-third for sugar-cane and two-fifths of other produce; chari paying 12 annas a bigah. From the coparceners and ordinary ryots, two-fifths and a half are the stated shares of Government; chari paying Rs. 1-2-0.

11. The same principle is adopted by Mr. Cavendish in his estimate of the rent demandable.

12. In stating the pargana money rates, a similar distinction is made by the kanungos between the above classes: where the lambardars are rated at Rs. 6, Rs. 7-8 for sugar-cane appears as the demand on the others, and so Rs. 3 and Rs. 3-12 for cotton, Re. 1-0-0 and Re. 0-6-0 for chari, Rs. 1-2-0 and Rs. 1-8-0 for bájra

ever quite sufficiently considered by the application to such tenants of favourable rates, such as are allowed in this district to Sayyids and in others to Brahmans and Rájputs.

The number of tenants-at-will has been latterly increased by the sale of several shares, the former owners of which are never allowed to cultivate their ancestral fields. The only Tagas who have lost the whole of their shares are Mahomedans, and the number of people likely to give trouble is increasing. In four pattis the owners pay khewat rates, in one patti Padhán, they charge themselves the rates of occupancy tenants and divide the profits.

As a rule the cultivating landlord is about the hardest master a tenant can have, but now the rights of the occupancy tenant are guarded, and in this estate only 132 acres are cultivated by tenants-at-will, 126 are in the hands of occupancy tenants, and 1,644 are held by cultivating proprietors.

The distinctions noticed by Mr. Cavendish have continued to be generally made between owner and tenant, but would not be permitted between lambardar and pattidar. In Barlah the old uniformity of rate continued until money rents superseded the old crop and kind rents.

and gram, Re. 0-9-0 and Re. 0-12-0 for shamak, Re. 0-12-0 and Re. 0-15-0 for barley. The zemindars (influenced doubtless by their actual circumstances) state the Government share generally at one-third.

13. The village expenses disbursed by the malguzars are audited by all parceners and collected *pro rata*.

14. There are no slaves ; but a kind of hereditary connection appears to exist between the zemindars and the low caste (Chamár) ploughmen employed by them. The latter cannot change masters, but they may become day labourers or leave the village.

15. The patwari (Kishan Bakkal) appears to have been chosen by the general body of the cultivators under the authority of the late Mokarraridar Ramdiyal. The lambardars appear formerly to have kept the accounts ; but the parceners complaining against them to Ramdiyal, Kishan Bakkal was appointed. His allowance is three pice in the rupee of the Government jama.

16. The village servants are paid chiefly in kind, of these all appear to be removable by the zemindars excepting the sweepers. To the village watchman there seems to have been added recently a chaukidar connected with the thana, though very properly chosen by the people.

Formerly Rs. 3 per cent. on the jama were allowed, but in this as in other communities the sharers become jealous of their representatives, and insist on statements of actual expenditure.

In this respect time has worked many changes. The serf has become a free labourer, and if he were not so attached to his house in the village would be master of the situation. As things are however, he stays on in the village, and there is no sufficient pressure of population and now no fear of famine to force him to leave it. But the ploughman can close his engagement at the end of each year and the ordinary labourer at the close of each month. Labourers get Rs. 3 or 4 per mensem, ploughmen an eighth share of grain and cotton, but nothing from cane and fodder crops for their own labour. The families of both of course can make what they can.

Kishan Bakkal was dismissed on the complaint of the zemindars in 1843 for misconduct, but the zemindars seem to have afterwards relented and he was appointed Gomáshta at their request, a Shekh of Chapár having been appointed patwári.

Of the old pice five went to the anna so that the patwári's pay amounted to Re. 1-6-0 per cent, and even when the jama was at its highest, he only received about one half of his present pay.

The village will now contribute Rs. 260 to the patwári fee fund, and the outlying hamlet Bhambaori Rs. 22, of this Rs. 108 have hitherto been paid to the patwári and Rs. 60 to the gomáshta.

The village servants are paid in kind at each harvest, and the zemindars' authority seems to be pretty complete over all except the bhangis, whose organization still remains so perfect that it defies the landlord, who must do the best he can with the sweepers of the village.

The four chaukidars are now paid under the new rules in money at Rs. 3, per mensem.

17. The population is stated at about 2,000 souls, living in 478 houses. The families of the proprietors (biswadars) amount to 759: many are in easy circumstances.

18. The ploughs are 143 drawn by four bullocks, and 42 drawn by two bullocks, the last of which the people reckon only half a plough. The former is reckoned equal to 90 or 100 bigahs (kacha bigahs of one-third the standard bigahs, or 972 yards only) a moiety being cultivated in each harvest.

19. The zemindars of this village appear to have rather an extended paikasht cultivation in lands belonging to others.

20. Water is found 60 feet from the surface, and a well, which must be of masonry, would cost about Rs. 1,500; none therefore are used for irrigation. The soil of this village does not appear to be favourable, though it is highly cultivated, owing to the industrious character of the inhabitants. Having no wells, it has none of the more valuable crops that require irrigation.

The population now amounts to 2,628 persons, living in 643 houses. There are now 320 proprietors instead of 215 as in 1825; and the number of the proprietors and their families is considerably greater than 50 years ago.

There are now 85 four bullock ploughs and 70 drawn by two bullocks, giving 480 plough cattle against 656 formerly recorded, but even if the old statistics are accurate there can be little doubt that the plough cattle are much better and larger than of old, so that a smaller number may be quite equal to the increased work now taken from them.

Notwithstanding the improvement in the standard of farming a four bullock plough is still reckoned sufficient for 100 kacha bigahs or $12\frac{1}{2}$ acres, but the Tagas of Barlah hold much easily and carelessly cultivated land in Bhambaori and other villages.

Barlah proprietors and tenants cultivate the whole of the outlying estate of Bhambaori which belongs to the Tagas of Barlah. They also hold land in Tajpur, Mandlah, Kutabpur and Bhainsani, in all 260 acres wet, and 643 acres dry, besides the land in Barlah.

A well for drinking purposes can now be constructed for Rs. 400 and water is found at 18 feet from the surface even late in the hot weather. Wells are not used for irrigation and are not therefore now sunk very deep. The soil is excellent and the cultivation extremely careful and good, but Mr. Cavendish's statement that Barlah had none of the more valuable crops that require irrigation is shown by the next paragraph to be somewhat misleading. Crops which can be grown in a dry tract may be said not to require irrigation, but most crops grown in irrigated lands were, it is clear, cultivated in Barlah as throughout the neighbourhood. In 1841 long before the Ganges canal was opened, this pargana entirely unirrigated grew about 1,500 acres of sugar-cane, 1,100 acres of cotton, and 1,500 acres of coarse rice. The cane crop has increased in area to 2,188 acres, cotton to 1,736, and rice to 3,963, of which more than 3,000 acres are sown with the finer rice previously unknown.

In the year of measurement Barlah had $8\frac{1}{2}$ per cent. of its area sown with cane, $2\frac{1}{4}$

with cotton, 18½ with the finer rice, 7½ with coarse rice, and the twice cropped area recorded was 17 per cent. of the area to which must be added 7 per cent. ploughed for cane after kharif. In 1825 and again in 1841 there was no irrigation; now when the benefit of every doubt has been given to the people, 1,820 acres are recorded wet, and 82 acres dry.

21. Mr. Cavendish has given various statements of

Norm.—He has rendered comparison perplexing by sometimes using one kind of bigah and one kind of weight and sometimes another. It is very important that all reports should be uniform in this respect.

the average produce of the different kinds of crops, as prepared by the

kanungos, by the tahsildars, by the zemindars, and by himself. The results vary considerably. The produce is stated to be rice, shamak juár, bajra, mash, sugar-cane, cotton in the kharif; and wheat, barley and gram in the rabi harvest. The land is divided into two descriptions of soil, dahar and dandah, low or inundated, and high.

22. The prices of grain as given for 10 years exhibit extraordinary variations; wheat

Norm.—The weight is given in seers (40 to a maund) of 92 Kaldar rupees each.

from 65 to 22 seers to the rupee; gram from 60 to 29; barley from 70 to 31; rice from 60 to 45; mash from 80 to 26; kapas or uncleaned cotton from 20 to 9; ráb from 25 to 30.

28. The estimate of the kanungos, taking as its basis a division of crops, with an average produce of three sorts of land, and the medium price of 10 years, gives a Government rental of Rs. 7,762; the zemindars estimate gives Rs. 5,335; Mr. Cavendish's Rs. 7,881; the pargana money rates Rs. 7,223; the revenue of fasli 1229 appears to have been Rs. 5,200, raised by the former Shekh Kallan to Rs. 7,400.

The same crops are still grown, although the proportions have no doubt changed greatly: the finer rice too has generally taken the place of the coarser variety, more land too is now devoted to fodder crops which in Barlah cover from 10 to 12 per cent. of the area.

The designations dahar and dandah are still in general use, dahar is loam, dandah as distinguished from dahar is sand, but the word is frequently used to denote more particularly high uneven sand as distinguished from level sand or bhúr.

During the last ten years prices have varied greatly less than they did in a similar period 50 years ago; and the highest prices of the former period are little above the average of the last ten years, but the price of gram approximates closely to that of wheat, and rice is also dearer in comparison, the finer rice following generally wheat and the coarser barley. Uncleaned cotton has changed in price less than other produce, but the price of sugar in its various forms has doubled.

The nikasis record a rental of Rs. 34,096 in the last year of drought and an average of about Rs. 15,000, but it would be difficult to levy this rental in money. In the famine year Barlah paid Rs. 5,611 in the form of water rates, and the average annual payment amounts to, over Rs. 4,500. The revenue has now been raised from Rs. 4,500 to the old sum of Rs. 5,200, a little more than the sum indicated by the rates of the first circle. The experience of other first class estates shows that rates much higher than those assumed could not be levied through a term of years hitherto, and although the new jama will no doubt fall lightly enough in this village, it would have been dangerous to trust the prosperity of Barlah to anticipations, and it would have been hard to assess this estate

has been ascertained with sufficient accuracy that the zemindars of Barlah owe from Rs. 50,000 to Rs. 60,000 to Banias. They attribute their embarrassments to the high price of cattle, high interest, uncertainty of the supply of canal water, and the exaction of full water rates even when the supply fails. They forget, however, to mention what I am afraid is the chief cause of the ruin of both great and small in this district, the reckless expenditure which is at present a necessary accompaniment of various domestic occurrences. Unless on the occasion of the birth of a son and heir, or of the release from life of a very aged relative, but little expenditure is incurred by Hindus except at a wedding. But the extravagance of the lower classes in the celebration of marriages has increased with the general prosperity, and the expenditure is stated by the people themselves to vary from Rs. 50 to Rs. 1,000. Even the expenditure of Rs. 500 must cripple the wealthiest Tagas, who have no other means of livelihood except the possession and cultivation of land paying Rs. 100 revenue.

Notwithstanding, however, the extravagance in some respects which custom imperatively demands, the Tagas of Barlah have bravely held their own. They have survived the over lordship of the Sayyids and of the Gújar Rája, the hard tyranny of Captain Shekh Kallan, and they have kept their land notwithstanding the full assessments of a punctual Government, the terrors of frequently recurring droughts, the constant nibbling of lesser Government officials, and more than all the ever watchful money-lender, and their own needlessly extravagant customs.

41. The village of Khaddah in pargana Pur appears to be possessed by 62 Gárahs, partly Moslems and partly Hindus. It is divided into two tarafs one being held by each class, and each charged with a moiety of the Government jama. The Hindu taraf is divided into two subdivisions or pattis; the Moslem into three thoks, paying the revenue of the Government rateably. The extent of land occupied by each does not follow exactly the same rule. The Moslems claim a larger extent than the Hindus to make up for

The settlement of this village is popularly attributed to Nawab Abdullah Khan of Jánsath, who built a fort here in the reign of Alamgir, but the village is clearly an old one, and the tradition merely shows that the Sayyids of Jánsath who extended their authority to this pargana at the time of their greatest prosperity, had a more than ordinarily firm hold on Khaddah. After the fall of the Sayyids the village was included in the mukarrari of the Gújar Rája of Landhaurah. On his death in 1813, Khaddah was settled with resident

inferiority of quality, and have an excess besides ; the extent of fields being reckoned by an inaccurate estimate, nominally 12 bigahs each plough. Although the tarafs are distinct, the fields intermingle, each cultivator desiring to have some good and some bad land. The village site, the unculturable and rent-free lands are common. One of the pattis is stated to be mortgaged to one of the proprietors of another, who receives from the cultivators of it the zemindari rasum, viz., one seer per maund of grain produce, and two annas and one anna and six pies per bigah on lands respectively cultivated with sugar-cane, cotton and chari. This transaction does not appear to have led to any alteration in the management or any permutation (dakhil kharij) in the Collector's books.

The lambardari or mukaddami allowance is quite distinct from the zemindari rasum, being attached to the management of the village concerns with Government, it used to be paid by the State, but now where paid at all is paid by the people.

In this village the lambardars appear to receive four rupees a plough, the village expenses are also met by an assessment on the ploughs. There are two patwáris who receive three per cent. on the Government jama ; the chaukidar six pies per house ; the bullahur's perquisites seem to be uncertain. The lambardars of this village appear to be unpopular ; and Mr. Cavendish contemplates the expediency of a kham or ryotwar settlement, deeming it apparently quite open to Government with the consent of the people to set aside the lambardars.

42. Of the cultivators not recognized as proprietors or zemindars there appear to be two classes. The one the members of which are said to be related to the Gárahs, is stated to have a right of posses-

Tagás and Gárahs. Sayyid domination seems to have incapacitated the people here as in other villages for self-government, and the Tagas have lost half their property and the Gárahs more than half to the Chapár mahájan, who now owns more than half of Khaddah. In earlier times Khaddah seems to have been much more leniently settled than Barlah, and here, as in most other cases in this district, assessments seem to have had little to do with transfers.

The Gárahs say that they are converted Bargújars and all Gárahs seem to have a Rájpút origin, they are excellent cultivators equal to any in the district ; but have not as a rule the organization of a good Rájpút community. Two Mahomedan and one Tagá patti remain, but the jama is now distributed by striking an average between the sums obtained by soil and assessable rates of each kháta. There are now 3 mahájan, 30 Tagá, 1 Shekh, and 22 Gárah sharers, and among the latter subdivision has now become so complicated, that for absolute correctness of account one bigah has to be nominally divided into 32,00,000 shares, but practically the inconvenience is no greater than if it were recorded simply shámilát. A chakbat partition has now been substituted for the old field by field arrangement, but the Mahomedan patti still has a greater extent of land than the others on account of the pooriness of the soil.

The lambardar's allowance no longer depends upon custom, and there is now only one patwári, who, as it happens, receives four per cent. on the enhanced jama. The chaukidar is paid by Government.

There are now 229 cultivators, of these 57 are proprietors, 140 occupancy tenants, and 32 tenants-at-will. Occupancy tenants pay under the new rent-roll Rs. 6, per acre, wet loam ; Rs. 4-8-0, per acre, wet

sion, which as it is alleged not to attach to particular fields, seems to be rather a vague title, and of cultivating their lands at the same rates as the zemindars, but without any vote in matters connected with the management of the village. The other though equally resident from time immemorial is said to have no rights whatsoever. There are páhi cultivators who pay one-fourth and one-third the produce besides the zemindari rasum. The revenue of Government is distributed in some of the pattis on a mutual estimate of the crop ; in others by the ploughs.

43. The village appears to contain of cultivated land 1,944 bigahs, land prepared for sugar-cane 536, arable 542. The bigah is of 2,916·09 yards of 2 feet 10 inches each.

44. The kanungo's estimate of rent (making the lambardars pay two-fifths and the others one-half the produce) gives a rental of 3,208. The zemindars estimate (taking all at the same rate) 2,320. The pargana rates give 3,064.

45. The jama is Rs. 2,500. This Mr. Cavendish appears to wish to be continued, stating that the present demand (about a rupee a bigah) is heavy but that good management would increase the number of ploughs and extend the cultivation, 90 or 100 kacha bigahs he considers the most that can be managed in that part of the country by a four bullock plough.

Houses 442 ; souls 1,159 (*vis.*, males 656 females 503) ; ploughs 54 ; 7 wells, but no irrigation.

46. The next village Mandlah is in the same pargana. It is inhabited by Gújars in whom Mr. Cavendish states the property

sandy loam ; Rs. 3, dry loam ; Rs. 2-4-0, sandy loam, and Rs. 1-8-0, sand. Tenants-at-will pay Rs. 10-8-0 and Rs. 9 for good land, and Rs. 3 for bad, but the zemindar who levies these rates is afraid to live in the neighbourhood. They are probably very near rack rents and do not, I think, condemn those fixed by the settlement department.

The cultivated area now amounts to 2,661 bigahs, there are 13 bigahs recent fallow, 22 cultivable waste, and 31 bigahs under plantations.

There is obviously a mistake in Mr. Cavendish's figures, 536 bigahs might be "ploughed but not sown" but could not be prepared for cane. The non-assessable area, barren waste and revenue-free land now amounts to 270 bigahs, but in 1841 nearly double this area was recorded.

The kanungo's estimate of rent seems to have held good until the opening of the canal, as the assessment of 1841, Rs. 2,281 assumed a rent-roll of nearly that amount.

The jama is Rs. 3,000, Rs. 275 in excess of the assessment fixed in 1830, when the whole estate was dry. In 1863 over 1,000 acres were recorded wet, now with the utmost care regarding the entry of irrigation in sandy soil, 823 acres have been so recorded.

Houses now number 499, 50 of owners and 449 of non-proprietary residents ; souls 2,018 (*viz.*, males 1,099, females 919) ; 75 four bullocks and 100 two bullock ploughs ; 509 plough cattles ; 250 other cattle ; 28 mares are recorded.

The owners of nearly 10 biswahs are said to owe Rs. 4,200, and the cultivators Rs. 3,500, about one year's rent. Many, both of the owners and cultivators, are money-lenders themselves, and the estate is highly cultivated and prosperous.

Mandlah, like most villages in the vicinity, seems to have come into the hands of the Jánsath Sayyids in the time of

to be vested. Past settlements appear to have been made with Sayyids, residents of a distant village, in the capacity of zemindars. These men

Note.—They appear to have been brought by Mr. Cavendish requiring them to explain the origin of their tenure, and to reconcile it with the state of property as exhibited in the records.

are stated now to disclaim any permanent interest: the kanungos also recognizing the

Gújars as zemindars. The latter attribute the recognition of the Sayyids as zemindars to the corruption of the native officers. The kanungos state it to have been made at the solicitation of the Gújars themselves who, having quarrelled with the mokarraridar Ramdiyal, sought thus to place themselves under the protection of the Sayyids who appear to be respectable men, and possessed of local influence. There is no patti in this village. All the Gújars, 28 in number, are said to have equal rights, nor do the headmen receive any avowed perquisites. Cultivators not belonging to the brotherhood are stated to have no rights of occupancy. The rates of division are stated at two-fifths and two-thirds, the gross produce of grain. Money rates for other articles.

53. The next village Chaprah, containing 1,384 bigahs of 2,916 yards, appears to be occupied by a numerous body of Gújars and Jhojhas (91) in whom the property is stated to have been vested. It was purchased by one Harsukh Rae, by private sale from the lambardars; and Mr. Cavendish puts the question, whether, and what, those persons could sell? They appear formerly to have received an allowance of Rs. 50, and three per cent. from Government. But Harsukh claims the full zemindari interest, and collects at the rate of 18 seers per maund, calling all the cultivators ryots. Six ryots claiming no right of property pay 17 seers as revenue, one seer as rasum zemindari, half seer as shahnagi. The houses are 71; population 396; 24 four bullock and seven two bullock ploughs. Patwári's allowances, four chittacks per maund, or three pice per rupee of Government rent. The Jhojhas claim to be descended from Ráj-púts. They are said to be good cultivators, their women assisting succession to

Alamgir or when they ruled Hindustan under the nominal sovereignty of Farrukhsér. It afterwards came into the hands of the Landhaurah Rája and on his death was settled with two Gújars probably mukaddams. The Sayyids however re-asserted their rights, and obtained the zemindari. Here, as in a good many other cases, it would probably have been fairer and more expedient to have made the Sayyids and those who held from them talukdars not proprietors.

The Gújars seems to have had distinctly defined rights, and it is to be regretted that Mr. Holt Mackenzie's fear "that throughout all the provinces the courts have too little distinguished the different interests which attach to land" should not have led to more decided action. The new law too as finally amended, does not authorize any special consideration to those who like the Gújars of Mandlah have been hardly treated.

This is borne out by a statement of shares dated 1823, from which no doubt Mr. Cavendish wrote his notes. There are now 18 Gújar occupancy tenants who are doing well.

The two mukaddams or representatives of the village community are still treated with consideration.

The present recorded area is 1,299 bigahs of which 1,086 bigahs are cultivated, and of this area formerly entirely dry 618 bigahs are now irrigated. The question of proprietorship has been decided in favour of the mahájana. This village too fell into the hands of Sayyids but the last owner had to be satisfied with a portion of the area still known as "Bhondah Burhiya Sayyidáni," and on her death the Jhojhas and Gújars assumed possession of the whole village. Very shortly after the annexation the head-men sold the village to Harsukh Rae of Chapár, who seems to have been in complete possession in Mr. Cavendish's time.

For many years half the village was mortgaged to two of the Gújars, but has now been released.

There are now 108 houses; 463 inhabitants; 17 four bullock and 20 two bullock ploughs; but there are 175 plough cattle. Many so called four bullock ploughs having 6 bullocks, and two bullock ploughs 2. There are 242 other cattle, and 8 mares.

property as in Barlah (No. 1.) The rental is estimated at Rs. 1,434 by kanungos; by money rates Rs. 1,357; by zemindars Rs. 1,678; average of four years Rs. 1,441.

The Jhojhás state like the Gárahás that they are descended from Rájputés and that they got their name from their zeal as soldiers, but they were never known as soldiers, and they are certainly excellent cultivators, and are more likely if Jhojhás be derived from "jhojhi," strenuous, to have been named from their industry as agriculturists. When a Jhojhá aspires to a more distinguished designation he does not call himself Shekh like other converts but Mughal, a circumstance which tends to confirm what Sir H. Elliot says is reported to be the origin of the Jhojhás of Anúpahar. The Jhojhás are excellent cultivators, but of late years they have been coming gradually under the tyranny of the pardah, and their women do little work in the fields.

Succession now follows Mahomedan law, the lower castes having proved less tenacious of Hindu customs than true Rájputés.

The rent-roll has now for some years averaged about Rs. 2,200, and the jama which in 1825 was Rs. 1,000, now stands at Rs. 1,060. Irrigation at low rates therefore has benefited the Bania rather than the State. Omitting the Gújar mortgagee, who has been fighting with the Bania mortgagor, the village owes over Rs. 4,000, a little less than two years rent, a sum which the people could probably liquidate by selling their cattle other than plough bullocks. The rate of interest varies from Rs. 24 to Rs 37-8-0 per. cent. per annum. Jhojhá's are said to spend Rs. 50 to Rs. 200 at weddings, and Gújars Rs. 100 to Rs. 600.

59. The next village Phalaudah nearly corresponds in circumstances with Barlah. It originally belonged to a set of Tagas (133 in number) sprung from the men of that place; divided into four pattis. Part has been sold under decree for debts of six persons including the lambardars of all the pattis, and bought by Shekh Kallan, who farmed the whole from Government. This person is said to be guilty of much exaction, getting the cultivators into his power through bonds executed by them in ignorance or in fear. Mr. Cavendish questions the extent of the Shekh Kallan's interests, urges the expediency of fixing those of the zemindars, and of fixing pattaas to all the cultivators.

The Tagas managed to get back their property by paying Shekh Kallan what a panchayat adjudged to be his due. The ex-kanungo recently tried to get a footing in the village but burnt his fingers in the transaction, and the Tagas own the whole of the village, having also purchased a small share acquired by the descendants of Shekh Kallan.

Before Shekh Kallan's time, the Taga zemindars appear to have paid one-third for grain, Rs. 3 per bigah for sugar-cane, and Re. 1-4-0 for cotton land, receiving deductions on failure of crop, all paid a like, but lambardars received five per cent. on the jama from Ramdiyal, the mokarraridar. Cultivators, not zemindars, are stated to have no rights beyond the year for which they undertake the cultivation.

The village appears to contain 3,526 bigahs (equal to 5,732 Bengal bigahs) of which 2,510 are cultivated, and 631 arable; 97 ploughs; 229 houses; 1,105 souls. The rental demandable is by estimate of pargana officers, Rs. 4,345; by pargana rates, Rs. 4,214; by village estimate Rs. 3,108; by Mr. Cavendish's estimate Rs. 4,345. The assessment is Rs. 3,925 which Mr. Cavendish proposes to continue for ten years with the addition of a percentage of $7\frac{1}{4}$ to lambardars.

The rates now are per acre, cane Rs. 12 for zemindars; Rs. 15 for tenants; cotton Rs. 6 for zemindars; Rs. 7-8 for tenants; chari Rs. 3 and Rs. 3-12; grain one-third for zemindars and 18 and 20 seers for tenants.

Increased fertility and easy assessment have rendered the old high rates for owners unnecessary.

Now the area of the two maháls of 15 and 5 biswahs into which Phalaudah is divided is 3,723 bigahs, of which 3,331 are cultivated and 86 arable. There are 63 four bullock ploughs and 58 two bullock ploughs but all the four bullock ploughs are not fully furnished, and there are only 287 plough cattle.

There are now 292 houses and 2,250 persons cultivating Phalaudah and in two adjoining villages.

The debts of the owners are said to amount to Rs. 7,000. Interest is charged at Rs. 15 to 24 per cent. per annum, and these favourable rates are a proof of the prosperity of the people.

The recorded rent-roll of recent years averages about Rs. 7,500, the new jama is Rs. 3,600, Rs. 650 more than the assessment of 1863, and Rs. 1,016 in excess of that fixed in 1841, which is somewhat more than the assumed rates of the first circle point to.

The reduction in the assessment of Rs. 1,400 made in 1841 may not have been absolutely necessary, but it seems effectually to have relieved Phalaudah.

61. The two villages Chapár and Walipur next mentioned, are stated to be properly pattis of one village, held by branches of the same family, but one Moslems, the other Hindus, Tagas by caste.

They, or some of them, are stated to have surrendered the zemindari to the tahsildar (a Sayyid and a man of influence) for protection against the Rája. He sold to a Hindu Lachhman Das, the Dewan of the late Rája, and the present engager; and the Tagas having sued for zemindari afterwards filed a deed of ládáwá (relinquishment). Mr. Cavendish questions the validity of these transactions in which only part of the zemindars appear to have been concerned. They are very numerous, and

In an old report of the tahsildar of Manglaur, it is stated that this village belonged to the Sayyids of Jánsath and was sold by them to Lachhman Das of Shamli in 1806, that the Tagas claimed proprietary rights but afterwards allowed that the Sayyids had been zemindars and that they only claimed haq mukaddami. Their claim was formally dismissed in the civil court in 1813. There seems to be no question that the Chapár Tagas held much the same position as those of Barlah, but the weakest claims became sufficiently strong when transferred to Lachhman Das in whose behalf the courts seem to have contradicted themselves with the most marvellous readiness, and if the rights of the Sayyids had

their possessions very ancient. The arable land is stated to have been divided 600 or 700 years ago. The waste site of villages and lands are still held in common. There are six pattis. Of the hereditary cultivators not of the race of Tagas, six claim right of occupancy and recovery after relinquishment, and the claim is allowed by the Tagas. The present engager claims the right of ousting all, Tagas included, at pleasure. The succession to the post of lambardar (manager) used it is stated, to be regulated as in Barlah, the lambardars receiving 10 per cent. commission: now they get Rs. 20 or Rs. 30 which the engager calls mukaddami, and the people themselves zemindari rasum.

The patwári has Rs. 20 each harvest, and holds 10 bighas of land. The engager claims a rent by kankut, at the rate of one-half the crop for grain, this is considered by Mr. Cavendish to be excessive. The rental demandable is by pargana officer's estimate Rs. 5,580; by pargana money rates Rs. 5,511; by village estimate at present rates Rs. 5,934; at owners rates Rs. 5,307; by amin's estimate Rs. 5,469; by engager's Rs. 7,895. The jama which had been Rs. 3,000, was needlessly reduced to Rs. 2,500. The lessee besides the stated rent takes various perquisites under the name of village expenses Rs. 303. The racba is stated at bigahs 5,901; cultivated 3,099 (Bengal bigahs 5,038) of which 454 is dofasli; prepared sugarcane 262; arable not cultivated 1,498; houses 358; souls 1,644; ploughs 100 of four bullocks and 68 of two.

not been sold to the treasurer of the Lanchaura Rája, the Chapár Tagas would have probably held their own as those of Barlah did. At the most whether to the Sayyid or the Bania the conferment of taluqdari right would have shown ample consideration for ancient claims, and Chapár might be a happier and better behaved village than it is. The Banias too have lost in other ways what they have gained in rental: the son of Lachhman Das was murdered in another village it is true, but it is generally believed that his Chapár tenants both instigated and took part in the crime, and as I write, the fine well built mansion of the mahájan stands empty, because a Bania has been murdered in a neighbouring town, and the representative of Lachhman Das and his murdered son is afraid that the thirst for blood should extend to the men who hold that their ancestors were outwitted by Lachhman Das.

The mukaddami haq now amounts to Rs. 125 divided among three Hindus and two Mahomedan Tagas.

The Chapár Tagas retained proprietary rights in the outlying and comparatively, valueless estate of Patheri which was divided like the parent village.

The new rent-roll stands at Rs. 10,173, and new jama at Rs. 5,100; now-a-days the landlord especially in Chapár gets little that is not entered in the rent-roll, but the Banias pay a pice per rupee on the price of all sugar purchased from the people.

The debts of the tenants are stated to amount to Rs. 12,700, Rs. 3,700 being due from Hindus and Rs. 9,000 from Mahomedans, the number of the tenants being about equal.

The area is now 5,608 bigahs of which 4,773 are cultivated and two-thirds of this are now irrigated.

Here as in Khaddah Mr. Cavendish's statement of land prepared for cane is hardly trustworthy.

Houses number 543; there are 2,616 persons; 82 four bullock and 49 two bullock ploughs with 560 plough cattle; 870 other cattle, and 25 mares.

63. To the property of the two next villages, Sumarathi and Kasimpur, various

In Kásimpur and Sumarathi Gújars and Játs are both now merely occupancy

claims appear to attach. The original owners appear to have been Jâts ; but the villages being deserted by them, were re-occupied, about 35 years ago, by a set of Gújars, who built a fort and settled the original proprietors with themselves. The Gújars claim 10 biswahs (a moiety) of the village. The Jâts claim to be considered proprietors of the whole 20 biswahs. The Jâts, however, acknowledge that they cannot claim from the Gújars any share of the crop, though they call them only hereditary cultivators, and the aggregate jama of the village is borne by them in equal proportions, viz., one-half by one class, one half by the other class, and it appears that the Gújars never paid the *seerenah* or *zemindari rasm* to the Jâts. Mr. Cavendish proposes to restrict the right of the Gújars to the lands cultivated by them (to be held by them subject to the payment of their proportion of the Government revenue and village expenses), and to that of pasturage, but without allowing them any property in the waste. The Sayyids of Rasulpur claim to be proprietors ; but this Mr. Cavendish appears to consider wholly groundless. It appears certain that they had nothing to do with the village for 60 years. Lachhman Das, the Dewan of the late Rája, on the death of that person, claimed the property of the village by notice of two deeds of sale, under which he was registered as *zemindar*, and admitted to engage with Government. Three only of a numerous body of coparceners having been parties to the sale, Mr. Cavendish proposes to regard it as conveying only the interests of the sellers ; one of these appears to have been *lambardar* on the part of the Jâts ; but he was a fourth son selected for the post during the life time of his elder brothers merely as being the shrewdest of the family, and Mr. Cavendish appears to hold it certain that the office was not saleable. The purchaser, however, or rather his representative, claims to be considered as absolute proprietor, with right of ousting at his pleasure all the cultivators. He appointed two persons to manage the village as *mukaddams*, one to be *lambardar* of Jâts, who sold the village, and the other a Gújar, assigning to them a liberal *mukaddami*. The share of the crop which is demandable as rent is only one-fourth, but the engager

tenants, and the *mahájan* of Chapár is the acknowledged proprietor. Mr. Cavendish's account of the change of proprietors is still given, but now that nothing can be got by denying it, all allow that the Sayyids of Rasulpur were formerly owners or at least had certain rights in both villages.

The tenants of both villages owe about three years rent, and the money-lenders with whom they deal follow rules of business which, if not unusual, are curious in their extortionateness. All advances even if made only a week before the close of the half year are charged two annas in the rupee interest, making even for an advance given on the first day of the half year 25 per cent. per annum. When money is advanced 15 annas are made to count one rupee, when grain, it is charged one *seer* dearer than the market rate, when on the other hand cultivators repay grain it is credited at one *seer* cheaper than the ruling rate at the time.

Lachhman Das seems to have had every thing his own way. If he bought from a Sayyid, the Sayyid's rights were held to exclude those of the community. If he bought from representatives, the representatives were held to have sold the rights of the whole community, and here as in Chapár bought by Harsukh Rae, son of Lachhman Das, the ancient claim of the Sayyids seems to have been set aside. Indeed the rights of the Sayyids became unassailable only when they had been transferred to a Bania.

is said to swell his demand by an arbitrary and excessive estimate of produce. The lambardars, it is said, used to receive from Rs. 2-8-0 to Rs. 5 per cent. on the jama with other advantages. The patwári gets 4 chittacks per maund on grain and 3 pice per rupee on money rents.

70. Khaikheri and Nanheri are stated to be possessed by a great number of Jaga zemindars, who had divided the cultivated land, but left the site of the village and waste in common. Many disputes existed among them as to the mode of paying revenue. Some desired to pay by the plough, others at a fixed rate per bigah, a third by mutual estimate of crops. It was at last agreed that all should undertake to cultivate according to their shares by inheritance and pay rent accordingly, or resign for ever their right to what they did not occupy, and what another occupied. There are some hereditary cultivators not of the class of proprietors but paying at the same rate, they cannot be ousted, but if they relinquish, have no title to recover, and cannot transfer. Páhi cultivators pay one quarter, at which rate in former times the lambardars paid; other cultivators paying one-third for grain. For zabti lands both paid the same rents; but lambardars used to get allowance of from 5 to 10 per cent; now they get nothing. Patwaris get three pice per rupee. There are two, Mr. Cavendish recommends one.

Khaikheri (for the name of the dakhili, manzah Nanheri is almost forgotten) has remained for the most part in the hands of the ancient Taga owners, but dissensions in this village have led to more important transfers than in Barlah and Phauldah and about $\frac{1}{5}$ of the land has fallen into the hands of outsiders since the reduction of the jama in 1841. The assessment has again been enhanced to the old sum Rs. 3,600 fixed after the death of Rájá Ramdiyal in 1813, when the whole area was dry. Now about half of the 1,842 acres of cultivated land is irrigable.

Tenants paying khewat rates are only found in this district as far as I know in the most heavily assessed tracts. There seems little doubt that in the old days of high assessments the zemindars associated with themselves the old residents who agreed to do their utmost in bad times, and enjoyed the same privileges as proprietors in good seasons.

The upper Duáb is by no means the only part of the country in which such tenants are to be found, and it is to be regretted that the new law makes no provision for them.

Their rates were fixed in Muzaffarnagar before the new law was passed. The shares now paid are one-half for good land and one-third for bad. The people of Khaikheri now cultivate in 14 villages besides their own, and favourable rates for poor resident cultivators are not required. There has for many years been a great deal of ill-feeling in this village on the subject of lambardars, which the reduction of their number from ten to two did not at all allay; the number has been again increased to five.

There is now one patwári who receive Rs. 10 per mensem.

APPENDIX IV. Comparative statement of soil areas.

No.	Pargana.	Settlement.	MIDNAP.					CULTURABLE.				BENAR.					
			Total area in acres.	District roads.	Railway	Canal and rajbahas.	Miscellaneous.	Total.	Musaf.	Total assessable area.	Groves.	Old fallow.	New fallow.	Total.	Canal irrigation.	Well irrigation.	Irrigation by other sources.
1	Pur Chapar, upland.	Mr. Thornton's settlement,	100	...	...	...	...	124	44	100	146	61	124	184	...	...	...
		Mr. Martin's settlement...	55,936	...	...	...	...	6,796	2,604	45,326	...	2,826	5,632	5,504	...	...	...
		Present revision	100	...	...	...	...	15	41	100	...	8	32	184	...	...	...
		Mr. Thornton's settlement.	57,289	...	...	...	...	8,618	2,873	46,048	201	2,717	1,772	5,590	...	...	...
2	Musafernagar,	Present revision	100	181	...	1,244	5,997	8,432	2,182	45,730	272	2,673	636	3,581	5	10	5
		Mr. Thornton's settlement.	56,747	...	...	...	...	12	17	100	...	74	84	154	...	...	...
		Mr. Martin's settlement ..	100	...	...	...	...	8,150	12,037	47,967	281	2,626	4,213	8,099	...	...	...
		Present revision	68,144	...	...	...	...	114	164	100	...	54	10	164	...	...	...
3	Shukarbad, upland.	Mr. Thornton's settlement.	69,538	...	...	...	...	7,844	11,449	50,245	604	2,730	4,994	8,324	...	...	...
		Mr. Martin's settlement ..	100	...	...	380	6,478	104	144	100	...	54	34	104	...	...	...
		Present revision	69,554	377	117	...	...	7,392	10,276	51,986	583	2,998	1,969	5,550	9	78	4
		Mr. Thornton's settlement.	100	...	...	...	...	18	3	49,408	116	3,898	6,570	14,578	...	...	...
4	Jansab	Mr. Martin's settlement ..	62,711	...	...	...	...	11,213	2,180	100	...	74	44	13	...	...	...
		Present revision	64,491	...	...	...	...	18	21	100	...	74	44	13	...	...	...
		Mr. Thornton's settlement.	100	...	...	...	...	11,444	2,088	50,909	280	4,058	2,438	6,716	...	...	...
		Present revision	64,517	177	...	...	...	10,267	2,044	52,236	339	4,712	1,014	5,965	21	38	3
5	Khasaul	Mr. Thornton's settlement,	61,928	...	...	...	...	6,941	1,167	100	...	8	12	204	...	...	...
		Mr. Martin's settlement...	100	...	...	...	...	104	14	100	...	54	34	104	...	...	...
		Present revision	61,971	...	...	...	...	6,239	1,133	54,600	386	2,843	2,659	5,337	...	...	...
		Mr. Thornton's settlement.	100	...	...	...	...	94	12	100	...	6	14	84	...	...	...
6	Bhūmah Sambhal-berah upland.	Present revision	61,953	305	...	...	...	5,934	1,135	54,394	429	2,853	793	4,575	26	343	21
		Mr. Thornton's settlement,	100	...	...	...	...	13	124	100	...	71	94	1	...	...	...
		Mr. Martin's settlement...	62,228	...	...	...	...	4,012	7,689	46,516	438	2,406	4,856	3,500	...	...	...
		Present revision	62,278	...	...	...	...	6,548	8,999	46,831	14	484	54	134	...	...	...
7	Bhūmah Sambhal-berah upland.	Mr. Thornton's settlement.	100	...	...	...	...	104	124	100	...	74	14	104	...	...	...
		Mr. Martin's settlement...	62,293	291	60	...	...	6,408	8,876	47,009	687	2,499	600	4,786	...	...	...
		Present revision	100	...	...	...	...	28	4	100	...	22	74	314	...	...	...
		Mr. Thornton's settlement,	48,715	...	...	...	...	8,700	83	39,932	169	8,724	2,492	12,376	...	...	...
8	Total	Mr. Martin's settlement...	48,823	...	...	...	...	9,210	80	39,573	304	2,108	2,900	5,303	...	...	...
		Present revision	100	...	...	...	...	19	4	100	...	44	24	74	...	...	...
		Mr. Thornton's settlement,	48,923	63	436	...	...	9,388	53	39,483	191	1,756	938	2,884	7	81	14
		Present revision	100	...	...	...	...	134	74	100	...	104	114	22	...	...	...
9	Total	Mr. Thornton's settlement,	388,846	...	...	...	...	48,973	25,870	324,182	1,491	28,982	32,397	62,840	...	...	...
		Mr. Martin's settlement...	100	...	...	...	...	194	74	100	...	64	54	13	...	...	...
		Present revision	384,430	...	...	...	...	50,008	26,211	326,406	2,220	19,654	16,286	58,340	...	...	...
		Present revision	384,057	177	4,465	...	...	47,702	25,013	391,228	2,321	16,990	5,970	27,941	66	331	25

APPENDIX IV. Comparative statement of soil areas—(concluded).

No.	Pargand.	Settlement.	FIRST RAUSSL.			SECOND RAUSSL.			TOTAL.			DAY.					Total cultivation.		
			Canal.	Well.	Other sources.	Canal.	Well.	Other sources.	Canal.	Well.	Other sources.	Total irrigation.	Bé-rah.	First rainfall.	Second rainfall.	Bhûr.		Total.	
1	Pâr Chagâr, upland.	Mr. Thornton's settlement,	53	99½	100
		Mr. Martin's settlement ...	59	64	...	18½	37,069	37,122
		Present revision	23,804	268	...	1,789	25,592	259	...	25,592	...	7,459	3,628	3,519	...	14,606	40,458
2	Muzaffarnagar,	Mr. Thornton's settlement,	19,676	28	21	7,345	10	36	19,925	48	62	20,025	...	1,736	6,291	14,097	22,124	42,149	
		Mr. Martin's settlement	22½	100
		Present revision	17,986	2,693	...	970	15	...	19,956	2,708	...	21,664	...	13,025	2,899	5,899	29,253	41,917	
3	Bhûkharî, upland.	Mr. Thornton's settlement,	16,065	1,393	105	9,898	51	65	18,966	31	174	20,663	...	6,463	7,545	11,766	25,774	46,416	
		Mr. Martin's settlement	99½	100
		Present revision	21,613	164	...	872	...	...	25,185	164	...	25,349	...	12,297	144	6,403	18,944	44,193
4	Jânâth ...	Mr. Thornton's settlement,	17,740	11	10	6,099	5	5	23,860	39	18	23,917	...	2,310	7,558	12,383	22,354	46,371	
		Mr. Martin's settlement	37,467	43,740
		Present revision	15,732	2,572	...	149	11	...	18,564	2,683	...	18,564	...	16,301	254	13,744	30,99	48,763	
5	Klâtânî ...	Mr. Thornton's settlement,	19,319	2,190	168	3,185	47	16	21,520	5	205	24,345	...	7,156	5,200	13,717	26,074	50,319	
		Mr. Martin's settlement	71½	100
		Present revision	16,525	3,329	...	107	15	...	18,632	3,264	...	19,886	...	14,367	74	6,037	20,478	40,364	
6	Bhâma Sambhal-hera, upland.	Mr. Thornton's settlement,	19,110	3,274	391	1,304	118	55	20,422	3,438	424	24,264	...	5,809	5,774	6,356	17,939	42,223	
		Mr. Martin's settlement	26,357	27,557
		Present revision	7,224	550	...	349	...	...	7,573	552	...	8,125	...	12,914	223	12,980	26,146	34,271
7	Total ...	Mr. Thornton's settlement,	6,318	289	55	2,676	43	7	9,001	423	76	9,499	...	4,197	5,347	17,556	27,101	36,599	
		Mr. Martin's settlement	90	100
		Present revision	105,884	9,576	...	3,936	44	...	109,320	4	...	119,440	...	75,293	6,721	48,512	130,526	249,966	
			91,227	7,185	720	22,401	373	174	113,694	7,989	949	122,632	4	27,671	37,818	75,376	141,365	363,997	

APPENDIX IVa.

Soil statement of revenue-free estates and patches.

Number.	Pargana.	Total area.	Barren.	Total assessable area.	CULTURABLE.				IRRIGATED.												Dry.				Total cultivation.		
					Groves.	Old fallow.	New fallow.	Total.	Barah.			1st ranshi.			2nd ranshi.			Total.			Total irrigation.	Barah.	1st ranshi.	2nd ranshi.		Bhtr.	Total.
									Canal.	Well.	Other source.	Canal.	Well.	Other source.	Canal.	Well.	Other source.	Canal.	Well.	Other source.							
1	Pur Chapar	...	801	1,794	37	50	13	100	...	...	3	677	1	10	306	...	1	983	1	14	998	...	100	242	354	696	1,694
2	Munsharnagar	...	881	9,395	123	805	581	1,459	5	37	9	2,033	265	43	592	23	23	2,630	325	75	4,030	...	843	1,467	1,596	3,906	7,936
3	Bhadrachari	...	64	2,020	13	60	3	76	...	...	...	1,044	...	...	324	...	...	1,368	...	...	1,368	...	70	277	229	576	1,944
4	Jansath	...	77	1,058	...	29	12	41	...	...	...	582	49	2	9	...	...	591	49	2	642	...	182	67	126	375	1,017
5	Khatundi	...	549	8,027	185	209	42	416	8	18	...	5,006	612	34	352	8	2	5,366	636	36	6,038	...	910	423	240	1,573	7,611
6	Bhimamah Sambalharah	...	...	52	4	6	...	10	...	...	...	10	...	...	5	6	...	15	6	...	21	...	11	7	3	21	42
	Total	28,018	2,672	22,346	362	1,159	581	2,102	13	63	12	10,352	927	89	1,588	37	26	11,953	1,017	127	13,097	...	2,116	2,483	2,548	7,147	20,244

APPENDIX V.

Statement showing the areas of sugarcane, cotton, and rice, irrigated by the Ganges Canal.

Name of pargana.	1860-61.		1861-62.		1862-63.		1863-64.		1864-65.		1865-66.		1866-67.		1867-68.									
	NORTHERN DIVISION ONLY.						NORTHERN AND AUPSHAH DIVISIONS ONLY.						ALL THE DIVISIONS.											
	Rice.	Cotton.	Cane.	Rice.	Cotton.	Cane.	Rice.	Cotton.	Cane.	Rice.	Cotton.	Cane.	Rice.	Cotton.	Cane.	Rice.	Cotton.	Cane.						
Pur Chapar	191	64	392	1,783	22	2,088	2,070	5	1,882	1,542	416	1,392	2,980	840	1,794	2,210	53	1,546	4,719	132	1,262	5,715	31	1,569
Muzaffarnagar	423	51	443	1,555	16	2,257	2,538	11	2,129	1,610	211	1,859	2,008	775	2,334	2,919	93	2,391	3,460	286	1,584	5,498	95	2,311
Bhadrakheri	346	20	403	2,133	14	2,108	2,272	17	1,993	1,273	133	1,739	2,765	880	2,142	3,018	107	1,968	4,192	113	1,459	5,281	105	1,810
Jansath	...	...	21	...	...	...	190	2	1,002	32	33	298	69	32	816	358	106	693	574	13	944	2,316	165	1,956
Khatauli	...	...	...	...	...	...	27	...	814	43	32	588	96	24	1,784	78	15	376	98	1	508	2,579	134	3,249
Bhūmah Sambhalherah	...	...	...	...	...	...	45	4	995	55	136	1,156	290	25	352	369	161	986	607	11	1,244	493	180	1,108
Total	960	135	1,259	5,470	52	6,453	7,072	39	8,815	4,544	953	6,972	8,208	2,576	9,323	9,852	535	7,960	13,650	556	6,991	21,832	710	12,003

Name of pargana.	1868-69.		1869 70.		1870-71.		1871-72.		1872-73.		1873-74.		1874-75.											
	ALL THE DIVISIONS—(contd.)																							
	Rice.	Cotton.	Cane.	Rice.	Cotton.	Cane.	Rice.	Cotton.	Cane.	Rice.	Cotton.	Cane.	Rice.	Cotton.	Cane.									
Pur Chapar	2,141	483	1,532	5,326	361	1,892	14,305	14,787	590	15,592	12,505	789	12,973	13,323	302	15,445	9,032	914	18,627	9,516	215	30,904	2,139	2,139
Muzaffarnagar	3,519	407	1,698	4,735	412	1,892	14,305	14,787	590	15,592	12,505	789	12,973	13,323	302	15,445	9,032	914	18,627	9,516	215	30,904	2,139	2,139
Bhadrakheri	3,993	402	1,880	4,437	467	1,892	14,305	14,787	590	15,592	12,505	789	12,973	13,323	302	15,445	9,032	914	18,627	9,516	215	30,904	2,139	2,139
Jansath	2,302	384	1,738	3,034	222	1,892	14,305	14,787	590	15,592	12,505	789	12,973	13,323	302	15,445	9,032	914	18,627	9,516	215	30,904	2,139	2,139
Khatauli	2,458	460	3,195	2,459	372	1,892	14,305	14,787	590	15,592	12,505	789	12,973	13,323	302	15,445	9,032	914	18,627	9,516	215	30,904	2,139	2,139
Bhūmah Sambhalherah	389	175	1,124	467	58	1,892	14,305	14,787	590	15,592	12,505	789	12,973	13,323	302	15,445	9,032	914	18,627	9,516	215	30,904	2,139	2,139
Total	16,802	2,311	11,147	20,448	1,892	1,892	14,305	14,787	590	15,592	12,505	789	12,973	13,323	302	15,445	9,032	914	18,627	9,516	215	30,904	2,139	2,139

No.	Name of pargana.	Settlement.	KHARY					
			Cane.	Cotton.	Manjl.	Dhan or coarse rice.	Makai.	Juar.
1	Pār Champār ...	Mr. Thornton's settlement	4	3	...	4	...	...
		Mr. Martin's settlement	1,485	1,114	...	1,485	...	...
		Present revision	3,266	1,348	204	732	99	335
		Present revision	2,192	1,733	3,024	230	85	330
2	Mārahārwar...	Mr. Thornton's settlement	4	3	...	3	...	...
		Mr. Martin's settlement	1,594	797	...	1,196	...	...
		Present revision	2,856	1,011	147	1,084	148	731
		Present revision	2,884	1,474	1,808	1,638	304	742
3	Bhākarberi ...	Mr. Thornton's settlement	4	3	...	5	...	...
		Mr. Martin's settlement	1,393	697	...	1,742	...	...
		Present revision	2,787	900	810	489	209	335
		Present revision	2,549	1,734	2,667	1,048	177	270
4	Jauli Jānath ...	Mr. Thornton's settlement	4	3	...	5	...	...
		Mr. Martin's settlement	1,750	875	...	2,187	...	...
		Present revision	3,314	1,601	29	831	708	1,241
		Present revision	3,104	1,659	1,263	1,289	387	705
5	Khātsali ...	Mr. Thornton's settlement	5	3	...	3	...	...
		Mr. Martin's settlement	1,916	1,149	...	1,149	...	...
		Present revision	4,393	1,256	284	987	730	1,291
		Present revision	3,814	1,594	1,238	1,908	931	1,032
6	Total ...	Mr. Thornton's settlement	4	3	...	4	...	...
		Mr. Martin's settlement	8,138	4,632	...	7,789	...	...
		Present revision	16,616	6,116	1,474	4,073	1,944	4,014
		Present revision	14,293	8,194	9,997	6,913	1,884	3,069
7	Bhāmāh Bāmbal-herah.	Mr. Martin's settlement	6	3	...	3	...	...
		Present revision	2,073	973	447	235	508	414
		Present revision	2,469	1,127	886	625	235	460
		Present revision	2,469	1,127	886	625	235	460
8	Grand Total ...	Mr. Thornton's settlement	...	...	...	...	...	...
		Mr. Martin's settlement	18,689	7,089	1,221	4,329	2,452	4,428
		Present revision	18,782	9,391	10,383	7,338	2,119	3,529
		Present revision	18,782	9,391	10,383	7,338	2,119	3,529

DIX VI.

ment of crops.

OR RAIN CROPS.

Fodder crops.		Urd.	Mung.	Moth.	Bajra.		Indigo.	Mand- wa.	Sanwan.	Other kharif crops.	Plough- ed for sugar- cane.	Total.
Charl.	Gowar.				With Moth.	Single.						
...	...	...	...	...	...	...	...	...	...	143	...	54
...	...	...	...	...	...	...	...	...	...	15,989	...	20,046
6½	1	8	7	...	...	17	...	...	1	...	1	56½
2,519	134	3,309	65	3,845	...	6,849	...	8	586	94	424	22,852
7	1	7½	...	4	...	15½	...	...	...	...	1½	56½
2,929	388	3,858	26	1,740	...	6,506	...	8	94	72	533	23,855
...	...	...	...	...	...	...	...	...	...	45	...	54
...	...	...	...	...	...	...	...	...	...	17,989	...	21,523
8½	1	10	9	...	...	4½	...	...	...	...	3½	58
3,464	392	4,214	92	3,781	767	1,979	4	55	180	187	1,158	22,195
8½	1	8½	6½	...	...	11	...	...	...	...	2½	57½
3,825	370	4,659	140	2,798	...	5,190	...	5	68	479	1,073	26,606
...	...	...	...	...	...	...	...	...	...	46	...	57
...	...	...	...	...	...	...	...	...	...	16,021	...	19,853
4	1	13½	10½	...	...	18½	...	...	...	...	1½	61
1,755	101	5,901	68	4,793	...	8,131	...	4½	258	7	560	27,131
6	1	10	2½	...	...	19	...	...	...	...	1	58½
2,754	264	4,608	34	1,590	...	8,776	...	4	66	186	507	27,151
...	...	...	...	...	...	...	...	...	...	48	...	59
...	...	...	...	...	...	...	...	...	...	20,995	...	25,807
6½	1	15½	5	...	...	18½	...	...	...	...	1½	68
3,174	222	7,560	249	2,505	...	7,607	359	...	358	87	746	30,751
7	1	11½	4½	...	...	1½	...	...	...	...	2½	55½
3,500	352	5,654	231	2,222	...	5,894	...	5	68	158	1,213	27,824
...	...	...	...	...	...	...	...	...	...	45	...	56
...	...	...	...	...	...	...	...	...	...	27,243	...	21,457
6½	1	9½	6½	...	...	4½	...	...	1	...	3½	58½
2,574	244	3,898	209	2,675	...	1,874	11	...	306	12	1,333	22,254
10½	2	7½	7½	...	...	3½	...	...	...	1½	1½	59
4,337	261	3,201	274	3,195	...	1,348	13	14	90	413	691	24,943
...	...	...	...	...	...	...	...	...	...	45½	...	56
...	...	...	...	...	...	...	...	...	...	86,157	...	108,686
8	1	11½	7½	...	...	12½	...	...	1	...	2	58
13,586	1,123	24,782	578	16,599	767	26,440	374	99	1,825	687	4,216	125,183
7½	1	9	5	...	...	12½	...	...	...	...	1½	57½
17,343	2,225	30,780	723	11,475	...	27,714	13	31	291	1,807	4,017	130,379
...	...	...	...	...	...	...	...	...	...	45	...	56
...
4½	1	8	9	...	...	22½	...	...	...	...	1½	61
1,495	272	2,811	26	3,082	...	7,768	...	...	162	79	539	30,886
5½	1	7½	11½	...	...	17	...	...	...	1½	1½	59
1,921	426	2,787	161	4,066	...	6,168	20	4	28	379	576	21,616
...
...
6	1	11	8	...	...	12½	...	...	1	...	2	58½
15,081	1,265	27,593	774	19,682	767	34,198	374	99	1,967	466	4,775	146,069
7½	1	9	5½	...	...	12½	...	...	...	...	1½	57½
19,264	2,671	23,527	884	15,541	...	33,882	33	35	419	1,666	4,593	151,995

APPEN

Comparative state

[illegible]

DIX VI.

ment of crops—(concluded).

TREE CROPS.				BARAH OR GARDEN CROPS.					Total cultivated area.	Twice cropped land.	Ploughed for sugar-cane after rain crops.
Falez.	Ploughed but not sown	Other rabi crops.	Total.	Vegetables.	Tobacco.	Poppy.	Other garden crops.	Total.			
...	...	73	46	...	...	...	...	...	100	...	...
...	...	4,455	17,076	...	...	...	...	...	37,122	...	...
...	1½	...	43½	...	...	...	...	...	100	...	...
...	473	164	17,606	...	...	...	...	...	40,458	...	...
...	½	...	43½	...	...	...	...	...	100	...	...
4	83	77	18,273	10	...	...	11	21	42,149	2,200	727
...	...	13	46	...	...	...	...	...	100	...	...
...	...	5,181	18,335	...	...	...	...	...	39,858	...	...
...	7½	...	47	...	...	...	...	...	100	...	...
...	3,200	240	19,722	...	...	...	...	...	41,917	...	...
...	½	1	42½	...	...	...	½	½	100	6	...
37	351	449	19,738	38	4	1	49	92	46,436	2,672	105
...	...	13	43	...	...	...	...	...	100	...	...
...	...	4,538	14,977	...	...	...	...	...	34,830	...	...
...	4½	...	39	...	...	...	...	...	100	...	...
...	2,096	87	17,062	...	...	...	...	...	44,193	...	...
...	½	...	41½	...	...	...	...	...	100	4½	...
22	92	16	19,067	24	7	...	22	53	46,271	2,148	296
...	...	13	41	...	...	...	...	...	100	...	...
...	...	5,686	17,933	...	...	...	...	...	43,740	...	...
...	14½	...	37	...	...	...	...	...	100	...	...
...	7,056	75	18,012	...	...	...	...	...	48,763	...	...
...	½	...	44½	...	...	...	½	½	100	4	...
...	78	80	22,175	50	45	10	215	320	50,319	2,033	100
...	...	13	44	...	...	...	...	...	100	...	...
...	...	4,981	16,859	...	...	...	...	...	38,316	...	...
...	10½	...	44½	...	...	...	...	...	100	...	...
...	4,376	118	18,110	...	...	...	...	...	40,364	...	...
...	½	...	40½	...	...	...	...	½	100	6½	1½
19	105	38	17,217	29	8	...	28	63	42,223	2,848	625
...	...	13	44	...	...	...	...	...	100	...	...
...	...	24,831	85,180	...	...	...	...	...	193,866	...	...
...	8½	...	42	...	...	...	...	...	100	...	...
...	17,201	684	90,512	...	...	...	...	...	215,695	...	...
...	½	...	42½	...	...	...	½	½	100	5	...
82	709	660	96,470	151	64	11	323	549	227,398	11,901	1,353
...	2½	...	39	...	...	...	...	...	100	...	...
...	732	51	13,884	...	...	...	...	...	34,270	...	...
...	...	...	40½	...	...	...	½	½	100	1½	...
14	21	40	14,871	15	18	3	76	112	36,599	440	74
...	...	...	...	...	...	...	...	...	193,866	...	...
...	...	...	...	...	...	...	...	...	27,557	...	...
...	...	...	...	...	...	...	...	...	221,423	...	...
...	7	...	41½	...	...	...	...	...	100	...	...
...	17,933	735	1,03,896	...	...	...	...	...	249,965	...	...
...	½	...	42½	...	...	...	½	½	100	5	1
96	730	700	1,11,341	166	82	14	399	661	263,997	12,341	1,927

APPENDIX VII.
Price statement of Jalalabad, district Muzaffarnagar.

Number.	YEAR.		RAHI.							KHARIF.						
	A. D.	Samvat.	Wheat.	Gram.	Barley.	Pear.	Munji.	Dhan.	Makal.	Juar.	Bajra.	Urd.	Moth.	Uncleaned cotton.	Gur.	Til.
			M. s. c.	M. s. c.	M. s. c.	M. s. c.	M. s. c.	M. s. c.	M. s. c.	M. s. c.	M. s. c.	M. s. c.	M. s. c.	M. s. c.	M. s. c.	M. s. c.
1	1822	...	0 23 0	0 32 0	0 35 0	0 34 0	1 0 0	1 2 0	0 35 0	...	0 30 0	0 31 8	1 0 0	0 12 0	0 16 0	0 16 0
2	1823	...	0 34 0	1 5 0	1 10 0	1 7 8	1 5 0	1 20 0	1 10 0	1 10 0	1 0 0	1 10 0	1 5 0	...	0 23 0	0 23 0
3	1824	...	1 0 0	1 20 0	1 30 0	1 25 0	1 10 0	1 16 0	1 10 0	...	0 35 0	0 35 0	0 35 0	...	0 26 0	0 26 0
4	1825	...	1 7 0	1 20 0	1 30 0	1 25 0	1 10 0	1 25 0	1 10 0	1 7 8	1 0 0	1 15 0	...	0 24 0	...	...
5	1826	...	1 5 0	1 30 0	1 35 0	1 33 8	1 0 0	1 15 0	0 35 0	0 37 0	0 25 0	0 30 0	0 29 0	0 19 0	0 21 0	0 18 0
6	1827	...	0 30 0	0 35 0	1 0 0	0 37 8	0 25 0	0 26 0	0 25 0	0 30 0	0 20 0	0 20 0	0 22 6	0 14 0	0 14 0	0 15 0
7	1828	...	0 35 0	1 5 0	1 10 0	1 7 0	1 30 0	1 37 8	1 20 0	1 10 0	...	1 15 0	1 10 0	0 30 0	0 21 0	0 24 0
8	1829	...	1 6 0	1 17 0	1 25 0	1 23 0	1 5 0	1 35 0	1 15 0	1 30 0	1 10 0	1 10 0	1 15 0	0 25 0	0 23 0	0 22 0
9	1830	...	1 4 0	1 15 0	1 30 0	1 17 8	1 2 0	1 20 0	...	...	1 10 0	1 5 0	1 5 0	0 24 0	0 22 0	0 19 0
10	1831	...	1 6 0	1 17 0	1 30 0	1 15 0	1 4 0	2 20 0	1 20 0	1 20 0	1 5 0	1 15 0	...	0 26 0	0 24 0	0 24 0
11	1832	...	1 0 0	1 15 0	1 15 0	1 16 0	1 20 0	1 10 0	1 10 0	1 10 0	0 35 0	1 0 0	1 0 0	0 25 0	0 25 0	0 16 0
12	1833	...	1 10 0	1 25 0	1 5 0	1 28 0	0 25 0	0 26 0	0 23 0	...	0 20 0	0 30 0	0 21 0	0 14 0	0 16 0	0 16 0
13	1834	...	0 30 0	0 28 0	0 35 0	0 23 0	1 2 0	2 10 0	1 20 0	1 0 0	1 10 0	1 30 0	...	0 20 0	...	0 18 0
14	1835	...	1 0 0	1 10 0	1 15 0	1 10 0	1 20 0	2 10 0	1 20 0	1 20 0	1 10 0	1 30 0	1 10 0	0 25 0	0 21 0	0 25 0
15	1836	...	1 10 0	1 20 0	1 25 0	1 23 0	1 0 0	1 10 0	1 10 0	1 0 0	0 5 0	1 0 0	1 0 0	0 14 0	0 20 0	...
16	1837	...	0 35 0	1 5 0	1 10 0	1 7 8	0 30 0	0 35 0	...	0 35 0	0 30 0	0 25 0	0 23 0	0 19 0	0 16 0	0 16 0
17	1838	...	0 20 0	0 21 0	0 25 0	0 26 0	0 35 0	1 0 0	0 35 0	0 2 0	0 25 0	0 30 0	0 30 0	0 15 0	0 14 0	0 22 0
18	1839	...	0 20 0	0 25 0	0 30 0	0 27 0	0 35 0	1 0 0	0 38 0	...	0 30 0	...	0 25 0	0 14 0	0 18 0	0 16 0
19	1840	...	0 20 0	0 23 0	0 30 0	0 27 0	0 35 0	1 3 0	0 35 0	...	0 25 0	0 30 0	0 28 0	0 15 0	0 17 0	0 14 0
20	1841	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total of 20 years ...			18 20 0	23 12 0	25 35 0	33 0 8	21 24 0	27 1 8	20 36 0	16 1 8	16 30 0	19 3 0	14 17 0	9 0 0	9 21 0	8 37 0
Average			0 37 0	1 6 10	1 11 2	1 36 0	1 3 21	1 14 1	1 1 13	0 33 1	0 33 8	0 38 14	0 28 14	0 18 0	0 19 1	0 17 6
21	1842	...	0 21 0	0 28 0	0 35 0	0 32 0	0 36 0	1 5 0	1 5 0	0 38 0	0 35 0	1 0 0	1 0 0	0 15 0	0 16 0	0 14 0
22	1843	...	0 25 0	0 35 0	0 35 0	0 31 0	1 0 0	1 10 0	1 0 0	0 38 0	0 35 0	1 0 0	1 0 0	0 17 0	0 18 0	0 15 0
23	1844	...	1 0 0	1 0 0	1 5 0	1 2 0	1 5 0	1 10 0	1 5 0	1 2 0	0 26 0	1 0 0	1 0 0	0 15 0	0 16 0	0 16 0

24	1844	...	1901	1 0 0	1 10 0	1 15 0	1 10 0	0 37 8	1 10 0	1 0 0	0 35 0	0 35 0	0 14 0	0 17 0	0 18 0
25	1845	...	1902	0 36 0	1 5 0	1 5 0	1 2 8	1 6 0	1 12 8	1 2 8	1 0 0	0 37 8	0 14 0	0 21 0	0 14 0
26	1846	...	1903	0 34 0	0 35 0	0 35 0	0 32 0	1 10 0	1 15 0	0 36 0	0 30 0	0 30 0	0 14 0	0 14 0	0 14 0
27	1847	...	1904	0 31 0	1 0 0	1 0 0	0 37 0	1 0 0	1 5 0	0 35 0	0 30 0	0 30 0	0 12 0	0 14 0	0 13 0
28	1848	...	1905	1 0 0	1 5 0	1 10 0	1 2 8	0 31 0	0 35 0	0 25 0	0 20 0	0 20 0	0 12 0	0 14 0	0 12 0
29	1849	...	1906	0 35 0	0 38 0	1 0 0	0 37 0	1 1 0	1 5 0	0 38 0	0 32 0	0 32 0	0 22 0	0 18 0	0 16 0
30	1850	...	1907	1 0 0	1 10 0	1 15 0	1 7 0	0 39 0	0 36 0	1 15 0	1 0 0	1 0 0	0 18 0	0 17 0	0 25 9
31	1851	...	1908	1 9 0	1 35 0	2 10 0	2 0 0	0 35 0	1 0 0	1 0 0	0 34 0	0 34 0	0 20 0	0 21 0	0 18 0
32	1852	...	1909	0 35 0	0 33 0	0 25 0	0 32 0	1 0 0	1 15 0	1 5 0	0 35 0	0 35 0	0 22 0	0 18 0	0 20 0
33	1853	...	1910	0 35 0	1 5 0	1 10 0	1 5 0	0 31 0	0 32 0	0 30 0	0 28 0	0 28 0	0 22 0	0 16 0	0 14 0
34	1854	...	1911	0 35 0	1 0 0	1 10 0	1 8 0	1 5 0	1 12 0	1 5 0	1 0 0	1 8 0	0 18 0	0 17 0	0 17 0
35	1855	...	1912	1 7 0	1 25 0	2 15 0	1 35 0	1 5 0	1 13 0	1 5 0	1 0 0	1 8 0	0 14 0	0 25 0	0 22 0
36	1856	...	1913	1 2 0	1 12 0	1 20 0	1 16 0	1 18 0	1 30 0	1 15 0	1 0 0	1 10 0	0 19 0	0 20 0	0 20 0
37	1857	...	1914	1 0 0	1 17 0	1 30 0	1 20 0	1 10 0	1 33 0	1 10 0	0 35 0	1 10 0	0 18 0	0 26 0	0 17 0
38	1858	...	1915	0 38 0	1 17 0	1 30 0	1 25 0	0 30 0	1 0 0	0 35 0	0 28 0	0 30 0	0 10 0	0 17 0	0 16 0
39	1859	...	1916	0 35 0	0 35 0	1 0 0	0 38 0	0 30 0	1 0 0	0 35 0	0 25 0	0 30 0	0 10 0	0 14 0	0 16 0
40	1860	...	1917	0 24 0	0 25 0	0 39 0	0 29 0	0 25 0	0 35 0	0 11 0	0 10 0	0 10 0	0 7 0	0 17 0	0 10 0
Total of 20 years ...		...	...	17 25 0	10 10 0	25 25 0	23 6 0	19 33 8	23 36 8	19 32 8	15 3 0	17 19 8	8 17 0	8 36 0	8 5 0
Average		...	...	0 35 4	1 0 8	1 11 4	1 6 5	0 39 15	1 7 13	0 39 10	0 30 2	0 35 0	0 16 14	0 17 13	0 16 4
41	1861	...	1918	0 14 0	0 15 0	0 20 0	0 17 0	0 30 0	0 35 0	0 22 0	0 20 0	0 20 0	0 10 0	0 18 0	0 12 0
42	1862	...	1919	0 28 0	0 30 0	1 0 0	0 35 0	1 20 0	2 0 0	1 10 0	1 2 0	1 2 0	0 12 0	0 22 0	0 16 0
43	1863	...	1920	0 39 0	1 7 0	1 25 0	1 30 0	0 39 0	1 30 0	0 30 0	0 23 0	0 23 0	0 7 0	0 17 0	0 10 0
44	1864	...	1921	0 39 0	0 35 0	1 2 0	1 0 0	0 39 0	0 37 0	0 30 0	0 25 0	0 25 0	0 8 0	0 16 0	0 13 0
45	1865	...	1922	0 23 0	0 28 0	0 33 0	0 30 0	0 33 0	1 0 0	0 30 0	0 25 0	0 25 0	0 12 0	0 18 0	0 14 0
46	1866	...	1923	0 25 0	0 25 0	1 0 0	0 37 0	0 25 0	0 32 0	0 24 0	0 24 0	0 24 0	0 11 0	0 16 0	0 14 0
47	1867	...	1924	0 22 0	0 28 0	0 31 0	0 28 0	0 30 8	0 35 0	0 25 0	0 22 0	0 24 0	0 11 0	0 10 0	0 10 0
48	1868	...	1925	0 26 0	0 30 0	1 2 0	1 0 0	0 18 0	0 18 0	0 14 0	0 12 0	0 12 0	0 6 0	0 8 0	0 8 0
49	1869	...	1926	0 18 0	0 18 0	0 25 0	...	0 19 0	0 25 0	0 12 0	0 12 0	0 12 0	...	0 10 0	0 8 0
50	1870	...	1927	0 12 0	0 14 0	0 25 0	...	0 20 0	0 25 0	0 16 0	0 16 0	0 14 0	...	0 14 0	...
51	1871	...	1928	0 25 0	0 30 0	1 5 0	...	0 35 0	1 10 0	0 25 0	0 24 0	0 24 0	0 10 0	0 16 0	0 15 0
52	1872	...	1929	0 25 0	0 28 0	1 0 0	...	0 32 0	1 10 0	0 30 0	...	0 24 0	0 8 0	0 16 0	0 6 8
53	1873	...	1930	6 24 0	0 30 0	1 0 0	...	0 32 0	1 0 0	0 28 0	0 28 0	0 27 0	0 10 0	0 15 0	0 8 0
Total of 13 years ...		...	...	8 2 0	9 8 0	12 18 0	7 17 8	10 2 8	13 7 0	8 32 0	5 22 0	7 13 8	2 25 0	4 35 0	3 16 8
Average		...	...	0 16 2	0 18 6	0 24 14	0 14 14	0 30 2	0 26 11	0 17 10	0 11 2	0 15 15	0 5 4	0 9 14	0 6 12

APPENDIX VIII.

Statement of wells.

Pargana.	Wells used for drinking.										WELLS USED FOR IRRIGATION.										Wells not used for irrigation.										IRRIGATING WELLS.										IRRIGATED AREA.										Total area irrigated of other mauzash	Grand total.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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Of 1 run.	Of 2 runs.	Of 3 runs.	Of 4 runs.	Total.	Of 1 run.	Of 2 runs.	Of 3 runs.	Of 4 runs.	Total.	Of 1 run.	Of 2 runs.	Of 3 runs.	Of 4 runs.	Total.	Of 1 run.	Of 2 runs.	Of 3 runs.	Of 4 runs.	Total.	Of 1 run.	Of 2 runs.	Of 3 runs.	Of 4 runs.	Total.	Of 1 run.	Of 2 runs.	Of 3 runs.	Of 4 runs.	Total.	Of 1 run.	Of 2 runs.	Of 3 runs.	Of 4 runs.	Total.	Of 1 run.	Of 2 runs.	Of 3 runs.	Of 4 runs.	Total.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
...	81	19	19	1	101	81	7	94	6	6	1	7	41	4	4	7	48</

APPENDIX IX.

Village statistics.

AGRICULTURAL POPULATION.																					
TOTAL POPULATION.																					
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APPENDIX X.

Comparative jama and cesses statement.

			Cess.	
				total
				—
				a. p.
				10 4
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				9 2
				0 0
				7 7
				1 6
				4 10
				0 0
				7 4
				10 8
				14 0
				0 0
				15 11
				4 0
				12 0
				0 0
				0 0
				0 0
				12 11
				1 8 0
				14 4
				1 12 0
				—
				3 2 9
				1 0 0
				1 7 9
				0 5 6
				—
				—
				7 14 0
				2 0 0
				—

APPENDIX Xa.

Statement of assumed jamas and cesses of revenue-free estates and patches.

Number.	Pargana.	Settlement.	Jama.			Cesses.			Remarks.
			Whole villages.	Revenue-free patches.	Total.	Whole villages.	Revenue-free patches.	Total.	

APPENDIX XI.

Statement of proposed jama for each year of the period of the settlement.

[illegible][illegible]

APPENDIX XII.

Memorandum regarding the Ganges Khadir, in the Musaffarnagar District.

THE pargana of Gordhanpur and the Khádir villages of Bhúkarheri which have now been incorporated with it, and those in Púr Chapár lying to the east of the present channel of the Soláni, formed in 1841 a fairly prosperous tract, much more advanced than the valley portion of Bhúkarheri lying further south.

2. To the north especially there were, as indeed there still are, "considerable villages of old standing," while the southern portion was described as "splendid rice land," though "unfit for residence." But this was of less consequence, because there were situated along the upland strong populous villages, the inhabitants of which descended into the Khádir, and cultivated, especially in the rainy season, the valley lands. It is difficult now to realize the attraction which the Khádir had for upland cultivators, and the comparative facility with which men were got to go long distances to cultivate land in the valley. But it must be remembered that nowhere from the northern to the southern boundary of the district was there a fair amount of irrigated land within ten miles of the Ganges valley, and that in Púr Chapár and the northern portion of Bhúkarheri there was practically no irrigation at all.

3. The valley lands in this way were relatively, as well as owing to circumstances which will be noticed later, absolutely much more valuable than they are at present. On the upland both sugarcane and rice were grown in fair proportions, but the former crop was more certain in the valley than in the unirrigated upland; and in the old pargana of Núrnagar, now Gordhanpur, notwithstanding the inclusion of many dry upland villages, the percentage of rice to the whole crop area amounted to 13. Rent-rates, it is true, were low, but here, too, relatively, the Khádir is much worse than it was; and in 1841 the rates of the Gordhanpur circle closely approximated to those of Khátauli, which has now the highest rates on this side of the district. But within 15 years of Mr. Thornton's settlement, two events occurred which were destined to exert a very great influence on this pargana.

4. On the 29th April, 1854, the Ganges Canal was opened, and enormous as are the benefits which it has conferred on the district of Muzaffarnagar, and the dry lands beyond its limits, there is no object in attempting, as has frequently been done, to evade the conclusion, that the canal has for the present ruined the valley lands lying on either side of the upland which it waters. The injury which has resulted from the construction of the canal is very unimportant when compared with the improvements which it has effected; but in this note I have to dwell upon the injury caused by the canal; even the benefits which canal irrigation has showered upon the upland have, served only to throw additional obstacles in the way of Khádir cultivation, by making upland cultivation so much more certainly remunerative and attractive than of old, that it is difficult to induce cultivators to face the trouble and greatly increase uncertainty of Khádir cultivation.

5. But an event fraught with more immediate disaster to the pargana of Gordhanpur, was the diversion of the Soláni from its old channel. This took place during the rains of 1855, and was caused immediately by a large pipal tree having fallen across the stream in the Saháranpur district. The river was in this way turned from its old well-worn channel through the pargana and past the town of Gordhanpur, into the line of jhils along the western boundary which mark the old course of a considerable branch at all events of the Ganges. This line of jhils extended right through the district, and was situated close below the upland. For many years the Soláni ran riot over the country, and even now its channel is a shallow one, and in the rains the country is for miles liable to be flooded.

6. It is unfortunate that the ruin of this tract should have taken place when it did. Even before the mutiny, the injury was sufficiently serious to attract the atten-

tion of Government, but before orders on the subject could be issued, the mutiny broke out; and after the outbreak, the hands of the new Collector were full of even weightier matters. But the complete pacification of the district, and the disposal of the additional work to which anarchy had given rise, soon afforded time for attention to the affairs of this tract, and in the cold weather of 1858-59, Mr. R. M. Edwards visited the pargana, and early in 1859 measures were taken for its relief. By this time percolation from the canal had begun to show itself in the increase of marsh, and Mr. Edwards' proceedings, as well as his expressions, clearly show that the relief which he recommended was rendered necessary by the increasing percolation from the canal, as well as by the change in course of the Soláni and by the floods of that then erratic stream.

7. There has been so much discussion regarding the causes of the deterioration of the valley lands, throughout the long correspondence which began with Mr. Edwards' letter, that it is important to note the impressions of the officers on whom first devolved the duty of visiting and relieving this unhappy tract. Mr. Edwards attributed the percolation to the canal itself, and stated as his opinion that "any system of drainage must meet the requirements of canal percolation, as well as the water of the Soláni." Mr. Edwards recommended the remission of Rs. 397-2-6 out of Rs. 1,169, the assessment of five villages, for 1265 fasli, corresponding with 1857-58, and of Rs. 1,114-1-0 out of Rs. 2,950, the demand for ten villages in 1858-59. When sanctioning these remissions, Government ordered an inquiry by a scientific officer into the causes of deterioration. Early in 1860, Mr. Edwards was forced after again inspecting the tract, to propose the summary settlement of eleven of the most seriously injured villages.

8. The scientific investigation introduced into the correspondence a very useless attempt to show that the canal was entirely free from blame. Mr. Parker, the officer intrusted with the investigation, stated truly enough in his report of the 27th March 1860, that mere inability to pay the former revenue, even if real, was no proof that swamp had increased. If there had been an increase, Mr. Parker would attribute it to the alteration in the climate owing to the canal, to the mutiny, and, especially, to the growth of jungle grass. Mr. Parker was compelled to acknowledge that there was greater humidity in the Khádir than formerly, that land which wet, when ploughed, used to dry, had ceased ever to dry, but he held that this phenomenon was due to "the greater humidity of the atmosphere, the over-flowings of the Soláni, and to the increase of jungle grass."

9. The late Colonel Turnbull, zealous as he was for the credit of the canal, could not attribute the increase of marsh to the change of climate, owing to the comparatively trifling irrigation from the canal; and held the Soláni answerable for the damage which had been done. This extremely unsatisfactory view was generally adopted, even by the Board of Revenue and Government, and the distinct opinion of a very competent and unbiassed judge was entirely overlooked.

10. Colonel Morton, Secretary to Government, Public Works Department, in his note of the 15th October, 1860, held that Mr. Parker's investigation "proved that the result expected from the percolation of the canal has already taken place, and as the canal supply is raised to its maximum, this percolation will increase." Colonel Morton held that the 400 cubic feet of water lost between Roorkee and Jauli must go somewhere; that although the change in the course of the Soláni and the increase of jungle grass were chargeable with some of the damage done, much of the increase of marsh must be traced to percolation from the canal.

11. Notwithstanding this reasonable decision by an officer of great experience in the Irrigation Department, but at the time raised above feelings of departmental jealousy, the crude and unsupported views of those who held the jungle-grass-

theory were universally adopted, and it was needlessly assumed that the Irrigation Department was going altogether beyond its province, in undertaking the drainage of a tract with the deterioration of which it had no concern.

12. In the meantime settlement operations were in progress, but the drought of 1860-61, gave a fictitious appearance of prosperity to the Khádir, and notwithstanding reduction, in some of the worst estates, the jumma of the pargana was maintained, indeed it was very slightly raised. Subsequent events soon showed how very urgently relief was required, and although it was promptly granted by Mr. Martin in 1862-63, after the revised assessments had been collected for only one year, it came in many cases too late.

13. The inevitable neglect of this tract during the mutiny had caused the ruin of not a few of the small communities throughout this tract, and under the pressure of maintained assessments and steadily increasing marsh, these impoverished communities gave way, transfers were general, and in many cases hamlets were deserted, and the helpless inhabitants wandered away to a less hopeless neighbourhood.

The statement of collections since 1264 fasli given in the Statement at the end of this note shows the relief that was given by Mr. Martin, but that relief came, in very many cases, too late to help the old zemindars, and it was not much deserved by speculative purchasers who had, it is to be feared, been assisted to what they hoped might prove a profitable speculation, by the kanúngo of the pargana, who purchased some of the lands.

14. Since the year 1863-64 the assessments of 34 estates in Gordhanpur (including six transferred from pargana Bhúkarheri) and of the six valley estates in Púr Chapár have been fixed year by year. In the spring of 1863-64, this tract was brought under direct management and its revenue administration was transferred to the Canal Department, but the retransfer was wisely ordered on the 16th October, 1865, and was effected in November. But before the transfer of the revenue charge of the tract, Captain Forbes, R.E., Executive Engineer of the Northern Division, Ganges Canal, had begun reclamation works in the afflicted tract.

These works were of three kinds :—

1st.—A protective bund, to prevent the waters of the Soláni from wandering over the country during the rains.

2nd.—Silting channels to carry river sand into the jhíls and marshes, accessible to it by such means.

3rd.—Drainage lines to carry off the superfluous moisture.

15. The reports regarding the results of these works during the latter period of Mr. Martin's residence in the district, are somewhat contradictory ; despair of any results seems to have alternated with extreme hopefulness, and gradually under the inspiration of the engineering skill and energy of Captain Forbes, the latter sentiment prevailed, and after Mr. Martin left the district it became stronger than ever. People began to consider what was to be done with the reclaimed land, the zemindars and cultivators were sternly blamed for not breaking up fresh land that had been reclaimed and were threatened with the confiscation and separate assessment of their waste.

16. About this time the Commissioner, Mr. Williams, attempted to supply one of the most urgent wants of the pargana by the construction of roads from the west, south-west, and south, which were intended to meet at Gordhanpur. One of these roads was constructed from Toghlaupur and old and important village on the edge of the upland lying to the south-west of Gordhanpur ; but a good deal of money was

wasted upon pontoons too large for the river, and the road was shortly afterwards allowed to fall into disrepair. There can be little doubt that Mr. Williams attempted to supply a real want, and it is discreditable to the district administration, that, from the first year of the British occupation up to 1869 not a single rupee was expended on roads in this pargana, and that the road from Toghlaipur to Gordhanpur was left unbridged to fall into total disrepair.

17. When the management of this tract was entrusted to me in the end of 1869, my first duty was to combat the views which I found prevailing on the subject of the Khádir. Government had in the previous year concurred in the Board's acknowledgment "that the deterioration of the land in the Soláni valley was not due to the opening of the Ganges Canal to which it had for many years been attributed." It was held that the reclamation of a large tract had been completed, that the drainage channels were of the greatest use, and that the confirmed evil habits of the people were the great bar to extensive breaking up of the generally reclaimed waste.

18. It was necessary to correct this impression. The 41 estates east of the Soláni were divided into three classes, 5 only were entered as reclaimed, 22 as improved, and 14 as little benefited. Further experience showed that even this statement was too favourable, and the village of Bulaqipur is the only one which could be rightly said to have been fully reclaimed, while the improvement of many in the large class entered as improved, turned out to be partial.

19. And the seasons were against the Khádir, a few dry years had held out hopes of prospective improvement, but three successive seasons of heavy rainfall discouraged enterprise and impoverished both zemindars and cultivators. A dam had been constructed to prevent flooding from the Soláni, but year after year, the dam was breached, and the crops behind it were swept away. In the villages entirely unprotected, the destruction was complete. A good deal of marsh had been silted up, and one estate Bulaqipur had been changed from a morass into a fairly fertile, though somewhat sandy, plain; but even the reclaimed lands were liable to inundation, which rendered the rain crops most precarious, while in comparatively few cases was the reclamation so complete that the land was fit for cold weather crops. And while the silting channels had been tolerably effective, the drainage lines had done little practical good. It is likely enough that they may have reduced the quantity of water in various jhils and marshes, but until drainage makes land dry enough for profitable agriculture, its practical value is small. In the years that followed, silting went on, the drainage channels were improved, but still not sufficiently deepened, and some progress was made, the people were encouraged by light assessments conditional on cultivation, to break up the culturable waste and neglect of orders was practically punished by raising the leases. This was done, it is hoped, in moderation, and in no case were the old assessments exceeded. And it is a reasonable enough that when a well-to-do landlord, or wealthy community neglects cultivation, a fair charge for the value of the land, as grazing ground, should be made. And every effort was made, by the most considerate management, to encourage cultivation, to keep together the communities and hamlets which remained, and to encourage the settlement of hamlets in abandoned villages. Nominally farmed, these estates were in reality settled annually with the zemindars, who claimed and obtained their proper share in the lease. A fair jumma was fixed before the rains, in order that the limitation of the Government demand might encourage the people to exertion, while in the event of the destruction of the rain crops, the estate was again gone over, and when requisite the demand for the year was summarily reduced. And, as a rule, the demand for the year was not reported until the revision had been made.

20. The whole system was, perhaps, informal, but the circumstances were exceptional, and in no other way could the tract be effectively managed. As Mr. Forbes discovered in Meerut, and as experience has shown in Musaffarnagar, trifling jummas

in the Khádír encourage inertness, rather than incite to exertion. The people saw that the man who made an honest effort to improve his property met with fair and considerate treatment ; on the establishment of a hamlet the old semi-punitive demand was at once reduced ; the destruction of a rice crop was considered not merely with reference to the area that was lost, but to the expenditure incurred in cultivating it. This will explain the otherwise remarkable feature of the jumma and cultivation statement at the close of this note, which shows that a reduction of the jumma went hand-in-hand with increased cultivation.

21. And generally this statement requires some commentary which may as well be given here. The relief given by Mr. Martin was needlessly great in many villages, whereas in some of the worst villages the relief was insufficient. The six Khádír villages in Púr Chapár, for example, were assessed at Rs. 80 instead of the old sum of Rs. 604. This excessive reduction in the case of uninhabited estates was hardly justified, and the direct management of 1273 fasli and 1274 fasli showed that the reduction had been excessive. On the other hand the villages whose calamities had been overlooked, gradually received consideration, and the revenue of this tract fell away until 1274 fasli as the following abstract shows :—

	Mr. Thornton's settlement.	Mr. Keene's settlement.	Mr. Martin's settlement.	1272.	1273.	1274.
	Rs.	Rs.	Rs.	Rs.	Rs. a. p.	Rs. a. p.
35 estates in Gordhanpur ...	7,777	6,819	3,998	3,998	3,481 8 11	2,950 10 3
6 estates in Púr Chapár,	604	...	80	80	226 7 6	196 10 2
Total ...	8,381	...	3,978	3,978	3,708 0 5	3,147 4 5

	1275.	1276.	1277.	1278.	1279.	1280.	1281.
	Rs.	Rs. a. p.	Rs.	Rs.	Rs.	Rs.	Rs.
35 estates in Gordhanpur ...	3,745	5,169 0 6	5,023	4,847	3,569	3,656	3,584
6 estates in Púr Chapár,	250	273 6 0	325	312	330	250	250
Total ...	3,995	5,442 6 6	5,348	4,859	3,799	3,906	3,834

22. But the despair of 1864 gave place to the unjustified hopefulness of the years which followed, and the exceptional dryness of 1868, and the high prices of that year, made the produce of the Khádír more abundant and more valuable, and enabled it to pay a higher demand and gave a distinct impetus to cultivation. But it is very unfortunate that a transient gleam of prosperity should have been the ground of so sudden an increase of the assessment. Had the assessments of Mr. Martin been equalized, but not materially increased, for the whole tract, the people would have had an opportunity of repairing their exhausted resources. But reduced leases were promptly raised, and the assessment of the tract in 1276 and 1277 fasli was about 70 per cent. in excess of the collections of 1274 fasli, and more than 50 per cent. in excess of Mr. Martin's assessment five years before.

23. When I received charge of the tract, a short experience of the neighbourhood convinced me that although in the uninhabited uncultivated estates the value of the grazing and of the grass justified higher assessments than had been levied, general reductions were required, especially in the estates at a distance from the Soláni which were suffering more and more from percolation. In 1278 fasli the assessments of 15 estates were reduced, and those of 4 enhanced at a net cost of Rs. 501. In 1279 fasli when further experience had brought a fuller acquaintance with the circum-

stances of the tract, the assessments of 14 more estates were reduced, further reductions were given in 4 cases, all the trifling enhancements of 1278 were cancelled, and in two cases the enhancement was changed into a reduction. The assessment for 1279 fasli was Rs. 1,060 less than that of 1278, and Rs. 1,549 less than that of 1277 fasli; it was Rs. 179 less than that of Mr. Martin.

24. The results of this moderation were for a time fairly satisfactory. Notwithstanding a succession of seasons of heavy rainfall, and the destruction of extensive areas of rice, the area under cultivation was not only maintained but was extended, hamlets were re-established, and for a time there appeared to be hope that decided improvement might be looked for; but it is to be feared that all that can now be said is, that matters are no worse than they were, and that the moderate extent of silting completed, and the comparative security provided by the embankment from Kuankheri to Amkheri, and recently extended to below Muhammadpur have made up for the increase of marsh owing to percolation.

25. For time has unquestionably proved the error of those who cherished the hope that the immense volume of water spread over the upland, and lost from the bed of the canal, would do no harm to the valley lands. Long before the days of the canal, the ruin falling on the upland, trickled through the sandy strata, and appeared at the foot of the broken ground which separates the upland from the valley, but now the occasional springs had become frequent and perennial streams; spots of moisture had become extensive tracts of marsh, and high up the slope the soil had become saturated and spongy, fields in which a few years before sugarcane had been freely grown, had become too wet for rice. On either side the Soláni the appearance of the country was much the same, marsh in the lower fields, the efflorescent reh on the higher, had ruined once fertile land, nor was the injury confined to this tract. To the south of Gordhanpur, in the valley portions of Bhúkarheri and Bhúma Sambalhera, village after village had been destroyed, and in the valley of the west as well as of the east Káli rivers, once productive fields were year by year coming under the influence of marsh and reh, and were steadily and rapidly falling out of cultivation. Colonel Morton's prediction had been amply fulfilled, percolation had increased as canal irrigation had been raised to the maximum, and the deterioration of the valley lands proceeded year by year, with the improvement of the upland. And it is in no way inconceivable that the percolation from the upland should reach the land lying to the east of the Soláni. This river has not yet cut out for itself a deep channel, and Mr. Parker himself suggested that the water absorbed into the upland might easily percolate through sandy strata to the lands beyond the river. No other theory can account for the phenomena observed, the gradual increase of percolation in villages secure from the floods of the Soláni, or situated far beyond its influence. The Soláni cannot have destroyed the villages of Bhúma Sambalhera and of Bhúkarheri, and the increase of jungle grass cannot account for the marsh and reh in the valleys east and west Káli of the rivers. One feature of this marsh attributed to percolation, or "choel" as it is termed in the neighbourhood, is that it is worst in the middle of the cold weather and not immediately after the rains. This is probably owing to the time which water takes to percolate through the strata which convey it to the valley, or it may be that the closure of the canal allows the water-bearing strata to empty themselves, and that it takes sometime to re-fill them. However, this may be, it is unquestionable that many fields which are dry enough when sown in November, become water-logged before the Christmas rains, and in December the moisture may be seen eating into the heart of a young wheat field, and destroying the crop.

26. Regarding the future of this tract I am unwilling to make any predictions; my own experience has supplied no fresh impressions since I reported on this tract in November, 1872. The necessity for adding four more villages to the "choel" tract under direct management, is a proof that the evils from which this tract was suffering had not diminished. The villages in question might, it is true, have been brought

under direct management some years before, but marsh had been steadily increasing, and alteration of the jumma became a necessity. Other estates were examined at the same time, but although I came to the conclusion that they could still pay the jummas assessed upon them, I should be very sorry that any decision of mine on the subject should give rise to the idea that reduction is not likely to be required. In this marsh affected valley, any arrangements for a term of years are out of the question. A village that could pay its way in 1872 may be an impracticable swamp in 1875, and the statistics of the four villages in which reductions were recommended are the best proof of the rapidity with which deterioration may advance.

	Jumma, 1841.	Jumma, 1861.	CULTIVATED AREA.						New jumma.
			1841.	1861.	Average of five years before 1872-73.	1871-72	1872-73.	1873-74.	
	Rs.	Rs.							Rs.
Abdipur ...	700	788	533	584	330	306	271	270	500
Yahiapur ..	378	390	357	356	194	206	189	187	275
Farukhpur ...	400	323	386	323	274	253	260	260	275
Hastmoli ...	144	90	78	93	61	53	53	80	60

And in these four estates it is likely that still further reduction may be required, for liable as they are to injury from Soláni floods, it is percolation which has destroyed their lower lands, and percolation is, it is to be feared increasing, and in this respect improvement of any kind is doubtful.

27. It is unquestionable that very considerable improvement has been effected by the silting channels, and there is good ground to hope that much land, when properly raised and then protected by the prolongation of the bund, may come under constant and successful cultivation. But as yet the drainage cuts have been of little practical advantage, and it still remains to be seen whether so few channels, even when deepened and cleaned, will be sufficient for the drainage of this extensive tract. In the meantime I can only repeat what I stated in my last detailed report, that, "until the people have some assurance that the crops which they sow and watch, will also ordinarily be reaped, it is needless to expect that they will shew any great zeal in breaking up the land, which has to some extent been reclaimed, but which is exposed to the full force of Soláni floods. It has been too much the custom to talk of these Khádir lands, as if the work of reclamation had been completed, and a vicious population were, for its own evil ends, obstinately abandoning a fertile plain to the jungle. The Gújars of Gordhanpur are neither pattern citizens nor model agriculturists, but they are of more use in the Khádir than the best upland tenants, and in the matter of the swamped estates, they do not appear to have been greatly to blame. They held on to their villages as long as they could and only left them when they were ruined and sold up, as did the Chauháns."

"And the Gújars of the villages adjoining the swamped estates, are, with a few Tagas, the people to whom we have to look for the cultivation of the tract when reclamation shall be complete, and when protection from floods shall be given. Until then, we can only wait, and must take care that those proprietary bodies which still hold their ground are not over-burdened, so that when the swamped estates are fairly reclaimed and protected, there may be found in their vicinity tolerably prosperous communities, ready and able to break up the jungle which may be rendered fit for the plough. But until the land shall be both reclaimed and protected, no very decided progress can, in my opinion, be looked for."

28. Regarding the future revenue management of the tract, I can only recommend the greatest caution in raising assessments, and the greatest readiness in investigating complaints of increased injury. It is not necessary to grant remissions

merely because they have been asked for ; and in this tract there is always the greatest danger, that villages may be ruined before their circumstances are ascertained. And in this tract, at all events, it is likely to be more profitable for Government to lean to the side of considerate treatment. The people have become impoverished and dispirited, and I trust that when next a drought brings a passing gleam of prosperity to the Khádir villages, Government may rest satisfied with what it receives, and not raise its demand on account of a very temporary improvement.

29. The Khádir is so very different from the upland, that I trust I may be excused for noting a few peculiarities which are not, I have found, always taken into consideration:—

1st.—A jumma is not necessarily severe, because it is not justified by even fairly accurate nikasis. When a community living in a well-to-do upland village owns a Khádir estate, the valley lands are often purposely left uncultivated, and are reserved for grass and grazing, the stated assets may be nil, but the advantage derived by the owners may be very considerable.

2nd.—Whenever an estate becomes inhabited, the income from grass and grazing at once falls, for it is difficult to preserve grass in an inhabited estate of ordinary size, and a cultivator always cuts grass for his own use and grazes his cattle free, and in many cases no doubt extends these privileges to upland kinsmen. When therefore a zemindar settles a hamlet in a previously uninhabited property, it is not unlikely that at first his profits may fall off instead of increasing, and he both deserves and requires consideration.

3rd.—An apparently flourishing cold weather crop, does not argue prosperity, even for that year, until the result of the rain crop, harvest is known. Rice is an expensive crop to sow ; cane, cotton, and maize require much labour and watching ; and the produce of rabi crops is in the Khádir small, while looking after them costs money. If then, 50 acres of rice crop have been destroyed in a village, paying Rs. 100 revenue, even a bumper crop in the cold weather in 100 acres would barely make up for the loss of the money expended in sowing rice, and the proprietor would have the greatest difficulty in paying his revenue. The estates belonging to Bakhshi Ram, Ját, of Bhúkarheri, in the extreme south have been assessed by me with constant reference to such losses, and considerable as is the income from grass, and fine as the cold weather crops, are, I do not think that this landlord has had profits more than commensurate with his expenditure and the risk he has incurred. Bakhshi Ram acquired an indifferent character during the mutiny, but he was acquitted on appeal, and of late years he has worked well in the valley.

4th.—Injustice has frequently been done by refusing to listen to complaints unless the cultivated area had been reduced, or by making reductions in assessment only in proportion to the reduction in the cultivated area. Rohalki was treated with distinct injustice, and the people were so stupid that they never explained the deterioration ; and as neighbouring villages seemed to require so much more attention, it was devoted to them. But their case turned out to be a perfectly good one, their rich rice land had been destroyed, but the area under cultivation had been maintained by the ploughing up of inferior sandy land on the other side of the village. For land worth Rs. 3, per acre, land worth Re. 1 had been substituted, and relief was clearly called for.

5th.—The appearance of Khadir fields in November, is no criterion of the state of the land a month or two later, when, as has been stated, percolation begins to act, and marsh eats into fields in a most remarkable manner.

30. With reference to the instructions contained in the Board's letter to the Commissioner, No. 168 of the 4th April, 1874, I would first repeat a paragraph written in November, 1872, with reference to the four villages added in that year to the list of estates leased annually. "It may be generally stated, with confidence, that in the Ganges Khádir tract, no assessment should fall at a higher rate than Rs. 2 per acre of cultivated land, if the area under cultivation has reached its probable limit. In only one estate, in pargana Gordhanpur, has a jumma falling at a rate in excess of Rs. 2 been assessed, while in only eight has the rate of assessment per acre of cultivation exceeded Re. 1-8. In three of these the assessment has been already reduced, and in one more, reduction is now recommended."

"Indeed, it would appear from the assessments in this pargana, that a first class estate should, under ordinary circumstances, pay a rate on the cultivated acre of Re. 1-4 to Re. 1-12; a 2nd class estate, a rate of Re. 0-14 to Re. 1-4; a 3rd class estate, a rate of from annas 10 to annas 14." Further experience has led me to modify these views. In the few Khádir estates in which money rents had been fixed, tenants have been forced to relinquish them, and I know of only one estate in which a rent-rate so high as Rs. 3 per acre is now paid.

31. For first class estates I consider a rent-rate of annas 8 per kucha bigha, or Rs. 3 per acre, a full one for any estate in the Khádir, even if sandy fields be excluded, and I would substitute for the rates formerly suggested Re. 1-4 to Re. 1-8 for a 1st class estate; Re. 0-14 to Rs. 1-2 for a 2nd class estate, and annas 10 to annas 12 for a 3rd class estate.

A good village, with fair proportions of cane and rice land, might be called 1st class. A fair village, with little or no cane, would be 2nd class. The many poor, ill-populated, ill-cultivated townships would come under the 3rd class. Karnpur, Rohalki, Dharmapur, and Abdipur, are the only estates under direct management, which can be placed in the 1st class, and it is to be feared that they are gradually passing out of it.

These rates are supported by no money rates, but they have been proved to be not too light by the relinquishment of similar rates, and by the break down of villages assessed at higher rates. They are, I believe, applicable generally to the whole Khádir from the Saháranpur to the Meerut boundary; and I believe that except in special cases rates of Re. 1-4 for 1st class villages, Re. 1 for 2nd class villages, and annas 12 for 3rd class villages are as high rates as in the present state of the Khádir it is prudent to collect from the cultivated land. The miscellaneous income varies, of course, so greatly, that it would be impossible to make any useful remarks regarding assessments with reference to it, beyond what has been already pointed out in paragraph 29.

32. The valley portions of Bhúkarheri and Bhúma Sambalhera are similar in character and in their circumstances to Gordhanpur. Marsh is year by year increasing just below the upland, and further east reh, and the increasing difficulty of retaining cultivators in making their successful management more and more difficult. In Bhúkarheri there is, with the exception perhaps of Dhariwála, no good Khádir village: in Bhúma Sambalhera, there are several, and in this pargana it is necessary to distinguish between reduced cultivation due to neglect, and that owing to real difficulties.

33. The notes in the pargana books give some useful information, and even when circumstances may change they may furnish a clue, to the state of the village. In bringing this memorandum to an end, I would strongly recommend my successors, in the management or assessment of this tract, to proceed with caution. The Ganges valley is very different in nearly every respect from the upland; it requires constant attention, and in order to understand it properly some local knowledge is required

ard serious enhancements should be delayed until the officer imposing them has had time to acquire some knowledge of the tract. And when the landlords by settling cultivators and ploughing up land, have done their utmost to comply with the wishes of Government, they should be treated with the greatest consideration. As far as I can see, efficient management will for many years to come be shewn by a gradual extension of the area under cultivation, rather, than by any addition to the land revenue; but if difficulties increase, even the most effective revenue management may fail to maintain the present low standard in this respect.

34. Should any fairly dry estates come under direct management as distinguished from annual leases, I would recommend that the experiment be tried of planting babul trees, which may be said to be one of the great wants of the upland.

At present the prospects of the Khádir lands are somewhat gloomy. Marsh is steadily increasing, the silting channels and the Soláni dam to the north have furnished some fresh land for the plough, but marsh is on the whole extending, and every depopulated hamlet injures the villages beyond it. Many estates, once far removed from the depredation of wild animals are now on the margin of an increasing swamp, which harbours innumerable pig and hog deer, and furnishes shelter for panthers and occasionally tigers. And the great enemy of this tract, the Ganges Canal, is increasing the injury it has caused to it year by year. A good supply in the Bhúkarheri rajbaha and the new distributary which now runs along the edge of the Bhúma Sambalhera upland will inevitably make Khádir management more difficult than ever, by attracting cultivators from the unprofitable valley lands; and it is likely that year by year cases of distress will have to be investigated, and assessments will have to be reduced. It is to be hoped, therefore, that it may not be too readily assumed that the complaints that may be made are necessarily untrue. Some officers are afraid to take up such complaints for fear that applications for reduction should be encouraged, but a short experience of this tract should enable any officer to distinguish between a fair claim and a groundless one, and unless complaints are investigated it is to be feared that in future, as in past years owners will be sold up, and hamlets will be depopulated by the ruthless attempt to collect the old revenue from ruined lands, and that the unavoidable difficulties which from such serious obstacles in the way of effective management of this tract, will be increased by a policy of harshness which will certainly prove in the end to be unwise as well as cruel and unjust.

ALAN CADELL,

Late Settlement Officer of Muzaffarnagar.

28th September, 1875.

No. 1.—Statement showing cultivated area and jumma of the swamped estates in parganas Gordhanpur and Pār Chapār, district Muzaffarnagar.

No.	Pargana.	Village.	1264 FASLI.		1265 FASLI.		1266 FASLI.		1267 FASLI.		1268 FASLI.	
			Culti- vated area.	Jumma.	Culti- vated area.	Jumma.	Culti- vated area.	Jumma.	Culti- vated area.	Jumma.	Culti- vated area.	Jumma.
				Rs.		Rs.		Rs.		Rs.		Rs.
1	GORDHANPUR.	Ibrahimpur ...	457	500	449	500	314	500	314	500	356	500
2		Abdipur ...	604	700	594	700	576	700	583	700	560	700
3		Udlaawala ...	36	50	31	50	16	50	...	50	13	50
4		Aiki ...	171	190	149	190	151	190	83	190	94	190
5		Bahlolpur ...	173	62	92	62	...	62	...	62	...	62
6		Baikuntpur ...	100	155	33	155	...	155	...	74	...	74
7		Bulaqipur ...	311	100	188	100	88	100	157	100	165	100
8		Barhiwala ...	203	215	151	215	129	215	115	215	110	215
9		Bansliwala ...	111	43	112	43	85	43	71	43	56	43
10		Bhadaulah ...	168	240	167	240	154	240	156	240	156	316
11		Bhadauli ...	229	220	191	220	177	220	179	220	186	220
12		Panchli ...	75	100	74	100	75	100	71	100	68	100
13		Jhinwarheri ...	230	254	219	254	172	254	181	254	97	245
14		Jogawala ...	111	2 6	54	2 6	69	216	27	216	19	216
15		Chamrawala ...	160	79	73	79	89	79	89	79	47	79
16		Husainpur ...	106	77	...	77	1	77	3	12	7	12
17		Dharanpur ...	394	500	388	500	388	500	388	500	385	500
18		Daudpur ...	212	186	44	186	14	186	8	123	16	123
19		Dhamat Sanian ...	195	174	195	174	24	174	19	174	39	174
20		Dhamat Gujran ...	109	81	109	81	11	81	42	81	71	81
21		Ruhalki ...	366	652	372	652	310	652	359	652	371	652
22		Zindawala ...	28	81	...	81	4	81	3	81	6	81
23		Salpur ...	265	300	250	300	96	300	78	300	70	300
24		Sikandarpur ...	359	335	352	335	215	335	227	335	146	335
25		Hastmoli ...	91	174	89	174	97	174	74	144	94	144
26		Shahdara ...	42	103	...	103	5	103	24	103	39	103
27		Almawala ...	62	372	22	372	44	372	8	372	54	372
28		Parakhpur ...	270	400	251	400	288	400	272	400	273	400
29		Faridpur ...	37	206	36	206	16	206	20	127	23	87
30		Karanpur ...	569	984	643	984	596	984	579	984	596	984
31		Kaliwala ...	156	339	123	339	88	339	55	300	76	200
32		Kherki ...	144	313	82	313	62	313	75	313	48	313
33		Mathana ...	420	425	429	425	462	425	448	425	465	425
34		Muhammadpur ...	167	200	191	200	114	200	116	200	122	200
35		Mahpur ...	240	126	240	126	...	126	...	54	...	54
36		Marakhpur ...	6	200	...	200	...	200	...	74	...	74
37		Narumasrah ...	274	133	174	133	6	133	1	73	...	73
38		Naunpur ...	150	115	150	115	...	115	...	64	...	64
39		Yahlapur ...	251	378	248	378	241	378	252	378	231	378
		Total of Pargana Gordhanpur ...	8,081	9,978	6,964	9,978	5,167	9,978	4,972	9,212	5,009	9,348
40	Pār Chapār.	Bhamanwala ...	36	67	...	67	...	67	...	67	9	67
41		Soheli ...	42	65	10	65	14	65	14	65	11	65
42		Shamsnagar ...	127	50	15	50	10	50	3	50	6	50
43		Sherpur ...	158	256	130	256	82	256	104	256	92	256
44		Kalewala ...	14	50	2	50	11	50	24	50	40	50
45		Mandanwala ...	37	116	...	116	3	116	...	116	...	116
		Total of Pargana Pār Chapār ...	414	604	157	604	120	604	145	604	158	604
		GRAND TOTAL ...	8,495	10,582	7,121	10,582	5,307	10,582	5,117	9,816	5,167	9,952

No. 1.—Statement showing cultivated area and jumma of the swamped estates in parganas Gordhanpur and Pūr Chapār, district Muzaffarnagar—(concluded.)

No.	Pargana	Village.	1278 FASLI.		1279 FASLI.		1280 FASLI.		1281 FASLI.	
			Cultivated area	Jumma.	Cultivated area.	Jumma.	Cultivated area.	Jumma.	Cultivated area.	Jumma.
				Rs.		Rs.		Rs.		Rs.
1	GORDHANPUR.	Ibrahimpur ...	208	175	201	125	159	150	171	150
2		Abdipur ...	371	788	306	788	271	550	270	500
3		Udiawala ...	...	25	...	25	17	25	23	25
4		Aiki ...	105	144	87	135	92	125	103	125
5		Bahloipur ...	...	62	...	62	...	62	...	50
6		Baikuntpur ...	70	35	104	20	6	50	...	30
7		Bulaqipur ...	193	100	200	100	124	100	134	100
8		Barhiwala ...	130	175	137	100	187	150	112	150
9		Bansliwala ...	24	50	51	50	37	50	50	40
10		Bhadaulah ...	97	60	96	60	74	50	71	50
11		Bhadauli ...	79	20	87	50	23	20	17	20
12		Funohli ...	79	40	75	40	52	50	38	50
13		Jhinwarheri ...	42	25	42	25	66	25	66	25
14		Jogawala ...	31	216	35	150	28	150	27	150
15		Chamrawala ...	8	100	16	70	18	50	20	50
16		Husainpur ...	5	15	13	12	8	20	5	20
17		Dharampur ...	315	550	367	450	279	450	295	450
18		Daudpur ...	...	25	...	25	2	25	2	25
19		Dhamat Sanian ...	21	80	18	40	1	40	...	40
20		Dhamat Gujran ...	...	60	...	20	...	30	...	30
21		Ruhalki ...	405	650	398	500	350	500	274	500
22		Zindawala ...	19	70	21	50	27	50	31	50
23		Saipur ...	50	50	50	40	41	50	40	50
24		Sikandarpur ...	107	100	100	80	66	100	65	80
25		Hastmoli ...	59	90	53	90	53	60	80	60
26		Shahdara ...	43	40	44	25	46	30	58	30
27		Almawalah ...	49	100	69	100	72	50	68	50
28		Farakhpur ...	265	322	253	322	260	275	260	275
29		Faridpur ...	72	87	73	30	51	50	58	50
30		Karanpur ...	531	980	483	700	455	700	415	700
31		Kaliwala ...	67	70	81	50	76	50	80	50
32		Kherki ...	46	40	45	30	25	30	10	30
33		Mathana ...	271	225	244	225	214	200	156	200
34		Muhammadpur ...	141	70	126	70	139	70	71	70
35		Mahpur ...	8	54	...	50	...	50	...	50
36		Marakhpur ...	62	20	61	20	...	24	...	24
37		Narmmazrah ...	44	40	52	30	6	30	6	30
38		Naunpur ...	...	50	...	50	...	50	...	50
39		Yahiapur ...	208	390	206	390	189	275	187	275
		Total of pargana Gordhanpur,	4,225	6,187	4,131	5,159	3,514	4,816	3,257	4,994
40	PŪR CHAPĀR.	Bhamanwala ...	18	25	19	15	13	15	11	15
41		Soheli ...	19	35	22	25	19	35	23	35
42		Shamanagar ...	11	80	12	50	...	50	...	50
43		Sherpur ...	63	40	62	40	71	50	71	50
44		Kalewala ...	13	50	17	50	8	50	5	50
45		Mandanwala ...	...	50	...	50	3	50	3	50
		Total of pargana Pūr Chapār,	124	290	123	230	114	250	113	250
		GRAND TOTAL	4,349	6,427	4,254	5,389	3,628	5,066	3,370	4,944

General parganah statement of areas and revenues of pargana Purchapur, district Muzaffarnagar.

Pargana.	Number.	Villages.	Highest revenue of 1st settle- ment.	Highest revenue of 2nd settle- ment.	Highest revenue of 3rd settle- ment.	Highest revenue of 4th settle- ment.
			Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
PURCHAPAR.	1	Ahmadpur ... ..	...	300 0 0	400 0 0	443 0 0
	2	Barlah ... ..	...	...	5,250 0 0	5,048 0 0
	3	Baserah ... ..	...	...	...	...
	4	Bucha ... ..	...	...	300 0 0	300 0 0
	5	Rahloipur ... ..	...	...	400 0 0	550 0 0
	6	Bhambauri ... ..	...	...	400 0 0	300 0 0
	7	Bhujaheri ... ..	...	...	650 0 0	650 0 0
	8	Bhuraheer ... ..	...	400 0 0	425 0 0	350 0 0
	9	Bhainsani ... ..	...	...	570 0 0	570 0 0
	10	Bhainsarheri ... ..	...	1,200 0 0	1,025 0 0	1,025 0 0
	11	Patheri ... ..	...	25 0 0	500 0 0	500 0 0
	12	Parai ... ..	...	483 0 0	483 0 0	1,450 0 0
	13	Pur ... ..	...	2,100 0 0	1,375 0 0	1,375 0 0
	14	Phalaudah, mahál 5 biswas ... ..	...	...	...	...
	15	Ditto ditto 15 ditto ... ..	...	...	3,925 0 0	3,625 0 0
	16	Tajpur ... ..	...	...	800 0 0	800 0 0
	17	Tejalherah, mahál Gujaran ... ..	...	...	...	...
	18	Ditto ditto Jhojha ... ..	...	...	...	...
	19	Tikaulah ... ..	...	...	400 0 0	425 0 0
	20	Jamálpur ... ..	...	300 0 0	490 0 0	443 0 0
	21	Jhabarpur ... ..	...	...	125 0 0	175 0 0
	22	Chapar ... ..	...	...	3,501 0 0	2,900 0 0
	23	Chapra ... ..	...	1,000 0 0	1,000 0 0	1,000 0 0
	24	Khojah Nagla ... ..	...	...	800 0 0	800 0 0
	25	Doheli ... ..	...	...	250 0 0	350 0 0
	26	Dhamat ... ..	...	...	650 0 0	650 0 0
	27	Raepur Jhojha ... ..	...	250 0 0	348 0 0	335 0 0
	28	Ratta Nagla ... ..	...	...	1,301 0 0	1,301 0 0
	29	Salempur ... ..	...	...	...	230 0 0
	30	Simbhalki ... ..	...	250 0 0	600 0 0	600 0 0
	31	Simarhi ... ..	...	1,600 0 0	...	850 12 0
	32	Suaheri, mahál 19 biswas ... ..	...	300 0 0	400 0 0	443 0 0
	33	Ditto ditto 1 ditto ... ..	...	...	...	...
	34	Sháhjahánpur ... ..	...	100 0 0	400 0 0	443 0 0
	35	Shakarpur ... ..	...	...	300 0 0	300 0 0
	36	Tughlakpur ... ..	...	...	1,700 0 0	1,700 0 0
	37	Abdulpur ... ..	...	...	220 0 0	230 0 0
	38	Kasimpur ... ..	...	1,600 0 0	549 0 0	549 0 0
	39	Kutabpur ... ..	...	...	...	...
	40	Kamberah ... ..	...	...	850 0 0	700 0 0
	41	Kaulaheri ... ..	...	...	875 0 0	875 0 0
	42	Khindaria ... ..	...	1,000 0 0	900 0 0	920 0 0
	43	Khudda ... ..	...	2,100 0 0	1,875 0 0	1,875 0 0
	44	Khai Kheri ... ..	...	5,000 0 0	3,600 0 0	3,600 0 0
	45	Kailanpur Jalálpur ... ..	...	...	1,060 0 0	1,060 0 0
	46	Gedhna ... ..	...	...	500 0 0	625 0 0
	47	Ghumaoti ... ..	...	...	500 0 0	625 0 0
	48	Lakhnauti ... ..	...	...	...	290 0 0
	49	Mandhla chak shimali ... ..	...	1,100 0 0	950 0 0	850 0 0
	50	Ditto ditto jannbi ... ..	...	...	...	...
	51	Mirzapur waf Sháhjahánpur ... ..	...	...	180 0 0	180 0 0
	52	Mehraepur ... ..	...	250 0 0	250 0 0	200 0 0
	53	Masrullahpur ... ..	...	...	300 0 0	300 0 0
	54	Naghla Mehaddad ... ..	...	...	450 0 0	500 0 0
	55	Nuhpur ... ..	...	300 0 0	400 0 0	443 0 0
	56	Nurnagar ... ..	...	...	800 0 0	800 0 0
	57	Harainti ... ..	...	...	1,100 0 0	580 0 0
		Total ... ..	...	...	...	...
		REVENUE-FREE ESTATES.				
	58	Chandan ... ..	...	...	...	...
	59	Megha ... ..	...	...	...	...
		Total ... ..	...	...	...	...
		Pargana Total ... ..	...	...	...	...

General pargana statement of areas and revenues of

PARGANAS	No.	Name	Area	Revenue	Area	Revenue	Area	Revenue
	1	Ahmadpur	40 0 0	31 0 0	30 0 0	30 0 0	30 0 0	30 0 0
	2	Bariah	5,098 0 0	4,238 0 0	4,494 0 0	4,566 0 0	4,566 0 0	4,566 0 0
	3	Baserah	5,680 0 0	5,439 0 0	5,808 0 0	5,814 0 0	5,814 0 0	5,814 0 0
	4	Bucha	323 0 0	230 0 0	200 0 0	200 0 0	200 0 0	200 0 0
	5	Baholpur	430 0 0	314 0 0	300 0 0	300 0 0	300 0 0	300 0 0
	6	Bhambauri	300 0 0	300 0 0	300 0 0	300 0 0	300 0 0	300 0 0
	7	Bhujaberi	650 0 0	313 0 0	300 0 0	302 0 0	302 0 0	302 0 0
	8	Bhuraheri	350 0 0	400 0 0	450 0 0	455 0 0	455 0 0	455 0 0
	9	Bhalsani	674 0 0	808 0 0	800 0 0	803 0 0	803 0 0	803 0 0
	10	Bhainsarberi	1,025 0 0	901 0 0	1,000 0 0	1,018 0 0	1,018 0 0	1,018 0 0
	11	Patheri	500 0 0	495 0 0	400 0 0	400 0 0	400 0 0	400 0 0
	12	Parai	1,450 0 0	1,132 0 0	1,300 0 0	1,316 0 0	1,316 0 0	1,316 0 0
	13	Por	1,983 0 0	2,113 0 0	1,978 0 0	2,019 0 0	2,019 0 0	2,019 0 0
	14	Phalandah, mahál 5 biswas	...	629 0 0	750 0 0	758 0 0	758 0 0	758 0 0
	15	Ditto ditto 15 ditto	3,925 0 0	1,945 0 0	2,200 0 0	2,325 0 0	2,325 0 0	2,325 0 0
	16	Tájpur	800 0 0	912 0 0	1,000 0 0	1,008 0 0	1,008 0 0	1,008 0 0
	17	Tajsherah, mahál Gujaram	1,972 0 0	1,973 0 0	2,200 0 0	2,326 0 0	2,326 0 0	2,326 0 0
	18	Ditto ditto Jhojha	...	...	...	...	...	...
	19	Tikaulah	400 0 0	364 0 0	400 0 0	402 0 0	402 0 0	402 0 0
	20	Jamálpur	314 0 0	383 0 0	320 0 0	320 0 0	320 0 0	320 0 0
	21	Jhabarpur	175 0 0	510 0 0	300 0 0	308 0 0	308 0 0	308 0 0
	22	Chapur	2,900 0 0	3,417 0 0	4,200 0 0	4,274 0 0	4,274 0 0	4,274 0 0
	23	Chapra	850 0 0	770 0 0	900 0 0	924 0 0	924 0 0	924 0 0
	24	Khojah Nagla	775 0 0	700 0 0	800 0 0	818 0 0	818 0 0	818 0 0
	25	Doheli	290 0 0	288 0 0	300 0 0	312 0 0	312 0 0	312 0 0
	26	Dhamat	575 0 0	487 0 0	500 0 0	525 0 0	525 0 0	525 0 0
	27	Raepur Jhojha	385 0 0	416 0 0	400 0 0	401 0 0	401 0 0	401 0 0
	28	Ratta Nagla	1,176 0 0	1,309 0 0	1,310 0 0	1,328 0 0	1,328 0 0	1,328 0 0
	29	Salempur	230 0 0	398 0 0	400 0 0	400 0 0	400 0 0	400 0 0
	30	Simbhalai	600 0 0	847 0 0	750 0 0	762 0 0	762 0 0	762 0 0
	31	Simerthi	851 0 0	816 0 0	900 0 0	912 0 0	912 0 0	912 0 0
	32	Suaheri mahál 10 biswas	...	381 0 0	320 0 0	305 0 0	305 0 0	305 0 0
	33	Ditto ditto 1 ditto	...	...	...	15 0 0	15 0 0	15 0 0
	34	Sháhjahánpur	...	219 0 0	220 0 0	230 0 0	230 0 0	230 0 0
	35	Shakarpur	200 0 0	306 0 0	750 0 0	256 0 0	256 0 0	256 0 0
	36	Tughlakpur	1,367 0 0	1,349 0 0	1,399 0 0	1,431 0 0	1,431 0 0	1,431 0 0
	37	Abdulpur	320 0 0	401 0 0	400 0 0	402 0 0	402 0 0	402 0 0
	38	Kasimpur	549 0 0	762 0 0	800 0 0	808 0 0	808 0 0	808 0 0
	39	Kutabpur	2,100 0 0	3,100 0 0	2,400 0 0	2,418 0 0	2,418 0 0	2,418 0 0
	40	Kamberah	800 0 0	707 0 0	705 0 0	723 0 0	723 0 0	723 0 0
	41	Kanlaberi	575 0 0	698 0 0	750 0 0	756 0 0	756 0 0	756 0 0
	42	Khindaria	730 0 0	729 0 0	771 0 0	739 0 0	739 0 0	739 0 0
	43	Khud'a	2,925 0 0	2,280 10 0	2,400 0 0	2,316 12 0	2,316 12 0	2,316 12 0
	44	Khai Kheri	3,019 0 0	2,978 0 0	3,250 0 0	3,286 0 0	3,286 0 0	3,286 0 0
	45	Kallampur Jalálpur	1,060 0 0	922 0 0	900 0 0	906 0 0	906 0 0	906 0 0
	46	Godhna	625 0 0	1,213 0 0	1,300 0 0	1,318 0 0	1,318 0 0	1,318 0 0
	47	Ghumaoti	825 0 0	588 0 0	600 0 0	610 0 0	610 0 0	610 0 0
	48	Lakhnauti	290 0 0	333 0 0	300 0 0	304 0 0	304 0 0	304 0 0
	49	Mandhla chak shimali	850 0 0	865 0 0	814 0 0	419 12 0	419 12 0	419 12 0
	50	Ditto ditto Janubi	...	...	...	404 12 0	404 12 0	404 12 0
	51	Mirzapur ar/ Sháhjahánpur	130 0 0	356 0 0	300 0 0	210 0 0	210 0 0	210 0 0
	52	Mehraepur	700 0 0	700 0 0	850 0 0	851 0 0	851 0 0	851 0 0
	53	Masraulpur	300 0 0	309 0 0	300 0 0	311 0 0	311 0 0	311 0 0
	54	Nagla Mehardad	450 0 0	341 0 0	340 0 0	346 0 0	346 0 0	346 0 0
	55	Nuhpur	...	120 0 0	240 0 0	241 0 0	241 0 0	241 0 0
	56	Nurusagar	937 0 0	716 0 0	450 0 0	456 0 0	456 0 0	456 0 0
	57	Haralnti	580 0 0	718 0 0	750 0 0	762 0 0	762 0 0	762 0 0
		Total	...	56,343 3 6	59,320 0 0	60,070 4 0	60,070 4 0	60,070 4 0
		REVENUE-FREE ESTATES.						
	58	Chandan	...	...	150 0 0	2 6 0	2 6 0	2 6 0
	59	Megha	...	...	250 0 0	17 12 0	17 12 0	17 12 0
		Total	...	...	400 0 0	21 0 0	21 0 0	21 0 0
		Pargana Total	...	56,343 3 6	59,320 0 0	60,091 4 0	60,091 4 0	60,091 4 0

pargana Pūrchaper, district Muzaffarnagar—(concluded.)

Proposed jama.	Total area in acres.	Not ASSESSABLE		ASSESSABLE						Incidence of present revenue on total area per acre.	Incidence of present revenue on total assessable area per acre.	Incidence of present revenue on total cultivated area per acre.
		Revenue-free.	Otherwise barren.	Culturable.			Cultivated.					
				Old waste.	Groves.	Recent fallow.	Irrigated.	Dry.	Total cultivated.			
Rs. a. p.										Rs. a. p.	Rs. a. p.	Rs. a. p.
40 0 0	114	...	10	...	...	...	...	104	104	0 5 7	0 6 2	0 6 2
5,200 0 0	2,284	...	237	106	30	6	1,820	81	1,901	2 4 5	2 9 4	2 11 9
8,800 0 0	7,327	...	1,005	292	34	92	1,801	4,108	5,904	1 3 3	1 6 5	1 7 9
200 0 0	632	...	311	141	1	4	46	129	175	0 5 1	0 10 0	1 2 5
500 0 0	589	...	112	20	...	2	105	300	405	0 14 10	1 2 9	1 3 2
440 0 0	713	...	16	216	...	2	123	357	480	0 9 11	0 10 1	0 14 8
1,220 0 0	1,233	...	74	28	6	12	351	762	1,113	0 15 10	1 11 0	1 1 5
620 0 0	347	...	50	16	1	1	241	38	279	1 12 7	2 1 6	2 3 7
1,200 0 0	748	...	87	54	8	7	561	31	592	1 9 8	1 13 5	2 0 5
1,020 0 0	782	...	69	18	2	...	302	391	693	1 4 10	1 7 0	1 7 7
380 0 0	454	...	11	...	...	17	...	426	426	0 13 5	0 13 9	0 14 3
1,600 0 0	995	...	103	29	11	15	414	423	837	1 9 9	1 13 1	1 14 7
2,500 0 0	2,982	953	308	28	47	2	634	1,010	1,644	0 13 5	1 7 10	1 8 4
900 0 0	424	...	40	7	5	11	289	132	421	1 13 9	2 0 10	2 1 6
2,700 0 0	1,408	...	106	25	7	2	797	471	1,268	1 14 8	2 1 4	2 2 1
1,100 0 0	859	...	52	28	1	1	274	504	777	1 4 6	1 5 10	1 6 8
1,460 0 0	1,305	...	179	34	6	2	719	364	1,083	1 3 0	1 12 0	1 12 11
840 0 0	615	...	81	17	...	2	260	265	515	1 5 10	1 9 2	1 10 1
540 0 0	292	...	37	15	6	...	194	40	234	1 13 7	2 2 8	2 14 11
300 0 0	537	...	87	6	...	24	51	359	410	0 8 11	0 10 8	0 11 8
440 0 0	1,315	...	567	125	...	86	62	375	437	0 5 9	0 10 10	0 15 9
5,100 0 0	2,841	96	194	102	16	13	1,624	792	2,420	1 12 9	2 0 2	2 1 8
1,060 0 0	657	...	70	20	...	17	313	227	530	1 9 10	1 12 11	1 14 3
900 0 0	509	...	45	15	3	...	326	120	446	1 12 3	1 15 3	2 0 3
440 0 0	314	...	15	2	...	...	262	34	296	1 6 5	1 7 7	1 7 9
640 0 0	590	...	112	31	2	4	154	227	441	1 1 4	1 5 6	1 7 3
560 0 0	389	22	14	27	...	1	183	142	325	1 7 1	1 9 5	1 11 6
1,340 0 0	615	...	45	2	1	1	48	83	566	2 2 10	2 5 7	2 5 9
620 0 0	329	...	15	8	2	1	262	41	303	1 14 2	1 15 10	2 0 9
720 0 0	935	...	69	34	...	20	62	744	812	0 12 4	0 13 3	0 14 2
900 0 0	1,015	...	68	115	...	11	129	692	821	0 11 2	0 15 2	1 1 6
463 0 0	719	98	118	15	...	4	12	362	484	0 10 0	0 14 4	0 14 9
37 0 0	34	...	5	1	...	...	28	...	28	1 7 6	1 11 7	1 12 7
260 0 0	215	...	28	9	...	...	25	53	178	1 3 4	1 6 3	1 7 4
300 0 0	175	...	33	5	...	2	125	10	135	1 11 5	2 1 10	2 3 7
1,700 0 0	1,982	...	765	197	10	17	634	359	993	0 13 9	1 6 6	1 11 2
600 0 0	806	...	42	6	...	20	89	633	722	0 11 11	0 12 8	0 13 2
1,100 0 0	1,008	...	80	18	4	...	222	669	901	1 1 7	1 3 2	1 3 6
2,700 0 0	1,548	...	132	42	12	3	1,169	190	1,359	1 11 11	1 14 9	1 15 9
900 0 0	541	...	108	23	5	...	311	96	407	1 0 7	2 1 6	2 3 5
660 0 0	706	...	60	16	5	23	13	589	602	0 14 11	1 0 6	1 1 6
1,260 0 0	884	...	53	21	2	12	463	333	796	1 6 10	1 8 4	1 9 4
2,000 0 0	1,545	33	138	10	16	7	806	535	1,341	1 15 1	2 3 4	2 3 10
2,600 0 0	2,094	...	165	40	9	26	787	1,057	1,844	1 11 6	1 14 0	1 15 3
920 0 0	566	...	108	11	2	1	226	212	444	1 10 0	2 0 4	2 1 2
1,600 0 0	2,187	...	741	99	5	28	354	960	1,314	0 11 8	1 1 9	1 3 4
800 0 0	420	...	44	48	1	...	311	16	327	1 14 6	2 2 2	2 7 2
500 0 0	243	...	31	8	5	1	191	7	198	2 0 11	2 6 8	2 8 5
540 0 0	577	31	30	34	...	27	113	342	465	0 15 0	1 0 9	1 2 3
440 0 0	532	...	23	105	...	30	95	279	374	0 13 3	0 13 10	1 2 5
260 0 0	1,012	...	497	96	...	14	16	389	405	0 4 1	0 8 1	0 10 1
920 0 0	535	...	41	6	1	1	329	157	486	1 11 9	1 13 11	1 14 3
50 0 0	407	...	312	38	...	6	...	51	51	0 2 0	0 8 5	0 15 8
400 0 0	399	...	95	14	...	1	111	178	289	1 0 1	1 5 1	1 6 2
380 0 0	546	...	21	10	...	6	97	412	509	0 11 2	0 11 7	0 11 11
460 0 0	1,144	...	512	227	...	27	94	284	378	0 6 5	0 11 8	1 3 6
920 0 0	510	...	47	4	5	3	246	105	451	1 12 10	2 0 2	2 0 7
59,550 0 0	55,389	1,237	8,422	2,673	272	636	20,025	22,124	42,149	1 4 1	1 3 6	1 10 4
150 0 0	993	...	787	18	...	11	...	227	227	0 2 5	0 9 5	0 10 7
400 0 0	365	...	48	23	...	...	165	129	294	1 1 6	1 4 2	1 5 9
550 0 0	1,358	...	785	41	...	11	165	356	521	0 6 6	0 15 4	1 0 11
70,100 0 0	56,747	1,237	9,207	2,714	272	647	20,190	22,480	42,670	1 3 9	1 3 5	1 10 3

General Pargana Statement of Areas and revenue

Pargana.	Number.	Village.	Highest revenue of 1st settlement.	Highest revenue of 2nd settlement.	Highest revenue of 3rd settlement.	Highest revenue of 4th settlement.	Highest revenue of 5th settlement.	Highest revenue of 6th settlement.
			Rs. a p.	Rs. a p.	Rs. a p.	Rs. a p.	Rs. a p.	Rs. a p.
MUZAFFARNAGAR.	1	Ilmaspur ...	447 0 0	110 0 0	447 0 0	447 0 0	625 0 0	762 0 0
	2	Baghonwali ...	1,600 0 0	1,085 0 0	1,705 0 0	1,705 0 0	1,600 0 0	1,445 5 0
	3	Bijupurab ...	750 0 0	1,032 0 0	575 0 0	575 0 0	725 0 0	932 0 0
	4	Bajheri ...	805 0 0	782 0 0	1,080 0 0	1,080 0 0	1,200 0 0	1,006 8 0
	5	Badheri ...	...	2,000 0 0	2,050 0 0	2,050 0 0	2,145 0 0	1,591 0 0
	6	Barhiwalah ...	...	...	...	...	...	765 0 0
	7	Bilaspur ...	367 0 0	366 8 0	451 0 0	451 0 0	451 0 0	795 7 0
	8	Bammanheri ...	390 0 0	415 0 0	390 0 0	471 0 0	471 0 0	496 8 0
	9	Bihari Panjpatti ...	...	...	...	...	...	1,310 0 0
	10	Ditto do. Pahar Khan ...	...	...	...	...	...	385 0 0
	11	Bhandurah ...	...	...	...	...	...	1,183 0 0
	12	Bhiki ...	...	700 0 0	500 0 0	500 0 0	650 0 0	903 0 0
	13	Bibipur ...	332 0 0	268 8 0	287 0 0	287 0 0	442 0 0	492 8 0
	14	Pachaindah Khurd ...	...	1,000 0 0	800 0 0	800 0 0	950 0 0	900 0 0
	15	Ditto do ...	1,812 0 0	1,672 0 0	1,812 0 0	1,397 0 0	1,650 0 0	2,277 0 0
	16	Tigri ...	...	...	...	...	...	340 2 1
	17	Jatmajherah ...	...	...	...	...	...	438 5 6
	18	Chandpur ...	...	650 0 0	825 0 0	825 0 0	950 0 0	1,004 0 0
	19	Khampur ...	...	...	...	...	...	1,740 0 0
	20	Khánjahánpur ...	...	...	...	...	...	193 0 0
	21	Datiyanah ...	...	598 0 0	598 0 0	598 0 0	2,000 0 0	2,665 0 0
	22	Dandherah ...	...	402 0 0	402 0 0	491 0 0	401 0 0	934 0 0
	23	Desalpur ...	...	...	...	...	...	500 0 0
	24	Rámpur ...	698 0 0	666 0 0	693 0 0	1,050 0 0	1,050 0 0	1,050 0 0
	25	Rukanpur ...	...	245 0 0	245 0 0	600 0 0	600 0 0	305 8 0
	26	Ruhanah khurd ...	...	...	...	...	...	1,600 0 0
	27	Ruhanah kalan ...	1,688 0 0	1,688 0 0	2,150 0 0	2,150 0 0	2,350 0 0	2,550 0 0
	28	Rai ...	...	1,600 0 0	1,800 0 0	1,800 0 0	1,800 0 0	1,530 0 0
	29	Sadhpur ...	...	...	...	...	...	615 0 0
	30	Sarwat ...	611 0 0	625 0 0	1,200 0 0	1,476 0 0	1,476 0 0	1,608 0 0
	31	Sisaunah ...	...	1,000 0 0	1,125 0 0	1,800 0 0	1,800 0 0	1,641 0 0
	32	Sikrerah ...	...	...	...	...	...	746 0 0
	33	Salajuddi ...	45 0 0	45 0 0	45 0 0	125 0 0	125 0 0	197 0 0
	34	Salempur ...	421 4 0	315 0 0	421 4 0	485 0 0	600 0 0	703 0 0
	35	Sujru ...	363 0 0	298 0 0	363 0 0	392 0 0	470 0 0	761 0 0
	36	Semli ...	...	...	...	...	...	907 0 0
	37	Shahabuddinpur ...	882 0 0	887 0 0	887 0 0	1,101 0 0	1,101 0 0	972 0 0
	38	Sherpur ...	263 0 0	265 0 0	445 0 0	445 0 0	500 0 0	654 0 0
	39	Sbernagar or Musa ...	650 0 0	658 0 0	650 0 0	1,025 0 0	1,100 0 0	1,554 12 0
	40	Kamheri ...	...	40 0 0	50 0 0	50 0 0	50 0 0	155 0 0
	41	Kukrah ...	525 0 0	478 0 0	525 0 0	1,201 0 0	1,550 0 0	1,891 5 0
	42	Kheri ...	227 0 0	300 0 0	350 0 0	350 0 0	380 0 0	418 0 0
	43	Lacherah ...	1,194 0 0	2,014 7 0	2,044 0 0	2,610 0 0	2,630 0 0	2,361 0 0
	44	Mirzapur ...	...	...	...	...	...	325 0 0
	45	Mustafabad ...	420 0 0	456 0 0	1,500 0 0	1,500 0 0	1,250 0 0	1,544 0 0
	46	Muzaffarnagar patti Abusaid Khan ...	...	...	...	...	...	563 0 0
	47	Ditto Sayyid Taha ...	...	...	...	...	...	330 1 0
	48	Ditto Iwaz Ali ...	...	...	...	...	...	441 0 0
	49	Ditto Nasr-ullah Khan ...	...	...	...	...	...	350 1 0
	50	Ditto Wajih-ud-din ...	...	...	...	...	...	362 8 0
	51	Makhiali ...	...	3,000 0 0	3,300 0 0	3,300 0 0	3,100 0 0	2,597 0 0
	52	Malirah ...	...	...	...	...	...	1,401 0 0
	53	Mimlanah ...	506 0 0	527 0 0	506 0 0	300 0 0	300 0 0	750 0 0
	54	Mandherah ...	136 0 0	173 0 0	136 0 0	190 0 0	190 0 0	427 0 0
	55	Maulaheri ...	...	...	...	...	...	...
	56	Medpur ...	...	400 0 0	400 0 0	305 0 0	225 0 0	227 0 0
	57	Miranpur ...	223 0 0	241 0 0	223 0 0	350 0 0	350 0 0	422 0 0
	58	Megha Kheri Mahál, 16 biswas ...	...	...	...	...	...	...
	59	Máhal Fazal Hussén do ...	1,265 0 0	1,553 0 0	1,800 0 0	1,800 0 0	1,600 0 0	1,700 0 0
	60	Máhal Khushwaktrae do ...	...	...	...	...	...	...
	61	Máhal Nidhh Singh do ...	...	...	...	...	...	...
	62	Naranah ...	378 0 0	378 0 0	378 0 0	1,000 0 0	1,000 0 0	806 0 0
	63	Narah ...	...	700 0 0	915 0 0	915 0 0	915 0 0	1,209 0 0
	64	Nasirpur ...	465 0 0	424 0 0	465 0 0	512 0 0	512 0 0	786 0 0
	65	Humáyunpur ...	178 0 0	176 0 0	138 0 0	181 0 0	181 0 0	187 0 0
	66	Yusufpur Mahál, Muhsim Aii ...	124 8 0	124 15 0	124 0 0	300 0 0	300 0 0	358 0 0
	67	Ditto Nayaz Ali ...	...	...	...	...	...	...
		Total ...	...	...	...	...	...	59,951 15 5
		REVENUE-FREE ESTATE.						
	68	Fahadarpur ...	...	...	...	...	...	...
	69	Jarandah ...	...	...	...	...	...	...
	70	Ratheri ...	...	...	...	...	...	...
	71	Sandhaoli ...	...	...	...	...	...	...
	72	Sahaoli ...	...	...	...	...	...	...
	73	Wahalnah ...	...	...	...	...	...	...
		Total ...	...	...	...	...	...	...
		PARGANA TOTAL ...	...	...	...	...	...	59,951 15 5

ness of pargana Muzaffarnagar, district Muzaffarnagar.

Highest revenue of 7th settlement.		Average of last five years.		Proposed jama.		Total area in acres.		NOT ASSESSABLE.		ASSESSABLE.							Incidence of present revenue on total area per acre.		Incidence of present revenue on total assessable area per acre.		Incidence of present revenue on total cultivated area per acre.	
								Revenue free.	Otherwise barren.	Culturable			Cultivated.									
										Old waste.	Groves.	Recent fallow.	Irrigated.	Dry.	Total cultivated.							
Rs.	a. p.	Rs.	a. p.	Rs.	a. p.										Rs.	a. p.	Rs.	a. p.	Rs.	a. p.		
850	0 0	854	0 0	1,200	0 0	501	...	55	32	1	320	93	413	2 6 4	2 11 1	2 14 5						
1,750	0 0	1,768	8 0	2,000	0 0	839	...	76	4	2	627	106	733	2 6 2	2 11 4	2 11 8						
1,100	0 0	1,112	0 0	1,100	0 0	780	...	51	31	16	321	360	681	1 6 7	1 8 2	1 9 7						
1,465	0 0	1,500	0 0	1,500	0 0	714	...	74	19	5	457	11	468	2 1 7	3 0 9	3 3 3						
1,900	0 0	1,918	0 0	2,100	0 0	846	...	106	15	1	644	63	707	2 7 9	2 14 6	2 15 7						
700	0 0	708	0 0	460	0 0	453	...	30	19	4	71	227	298	1 0 3	1 1 6	1 8 9						
2,350	0 0	2,396	8 0	2,200	0 0	1,325	...	165	26	26	745	335	1,080	1 10 7	1 15 1	2 0 7						
631	0 0	637	0 0	700	0 0	645	...	60	34	44	224	283	507	1 1 3	1 3 2	1 6 1						
1,600	0 0	1,622	4 0	1,800	0 0	769	...	128	16	...	538	87	595	2 5 5	2 14 10	3 0 6						
450	0 0	472	0 0	600	0 0	212	...	8	...	...	170	26	196	2 12 3	3 1 0	3 1 0				
1,250	0 0	1,259	0 0	1,500	0 0	2,144	...	82	107	...	84	1,659	1,753	0 11 2	0 11 8	0 13 8						
1,000	0 0	1,054	0 0	1,260	0 0	945	...	76	59	...	391	395	786	1 5 4	1 7 4	1 9 8						
500	0 0	500	0 0	640	0 0	484	...	43	23	...	237	180	367	0 12 2	0 13 7	0 14 9						
1,000	0 0	1,022	8 0	1,100	0 0	1,449	...	86	92	...	220	961	1,191	0 12 2	0 13 7	0 14 9						
2,800	0 0	2,837	0 0	3,200	0 0	1,183	...	158	15	...	974	4	978	2 11 3	3 3 3	3 4 4						
550	0 0	508	12 0	900	0 0	953	...	128	29	...	190	580	770	0 15 1	1 2 0	1 2 8						
500	0 0	510	0 0	980	0 0	1,136	...	96	70	...	193	736	928	0 12 8	0 13 10	0 15 6						
2,300	0 0	1,218	0 0	1,360	0 0	1,149	...	79	65	...	23	448	522	1 3 1	1 4 7	1 6 5						
1,472	0 0	1,484	0 0	1,200	0 0	1,009	...	67	51	...	31	187	669	1 3 1	1 4 6	1 6 5						
200	0 0	206	8 0	240	0 0	736	...	148	57	...	...	207	307	0 5 4	0 11 7	1 2 3				
3,100	0 0	3,118	4 0	4,230	0 0	3,062	...	218	131	...	45	1,056	1,591	1 5 11	1 7 7	1 9 4						
940	0 0	963	0 0	1,300	0 0	1,257	...	137	103	...	...	440	575	1 0 6	1 2 7	1 4 5				
400	0 0	400	0 0	380	0 0	418	...	69	11	...	39	...	296	0 13 11	1 0 8	1 3 6						
1,300	0 6	1,312	0 0	1,400	0 0	951	...	160	19	...	98	390	284	1 7 7	1 12 3	1 5 4						
270	0 0	288	12 0	280	0 0	427	...	36	20	...	65	30	140	0 10 6	1 1 7	1 5 4						
1,678	0 0	1,714	0 0	1,600	0 0	1,257	...	223	48	...	77	53	840	1 4 4	1 9 2	1 12 8						
2,092	0 0	2,128	0 0	2,000	0 0	1,793	...	176	133	...	82	89	1,393	1 2 6	1 4 1	1 7 2						
1,800	0 0	1,818	0 0	1,500	0 0	1,424	...	98	66	...	101	262	894	1 0 10	1 2 2	1 4 9						
650	0 0	653	0 0	580	0 0	714	...	94	81	...	52	...	484	0 13 0	0 14 11	1 3 2						
2,065	0 0	2,084	8 0	2,500	0 0	1,761	...	344	70	...	19	...	216	1 15 10	2 5 7	2 8 0						
2,300	0 0	2,318	0 0	3,200	0 0	1,659	...	216	85	...	11	...	360	1 14 10	3 3 7	2 6 1						
550	0 0	559	0 0	540	0 0	1,133	...	169	89	...	21	...	847	0 7 7	0 9 0	0 10 2						
895	0 0	601	0 0	600	0 0	864	...	164	92	...	23	...	232	0 11 1	0 13 9	1 0 2						
1,050	0 0	1,062	0 0	900	0 0	807	...	76	53	...	71	...	584	0 11 10	1 3 10	1 7 2						
888	0 0	944	0 0	1,100	0 0	1,849	...	147	22	...	5	...	601	1 1 10	2 3 3	2 4 2						
900	0 0	912	0 0	1,000	0 0	898	...	79	30	...	3	...	111	0 9 6	2 3 6	1 4 4						
1,200	0 0	1,214	8 0	1,400	0 0	1,162	...	115	98	...	26	...	543	1 3 3	1 7 11	1 11 7						
650	0 0	672	8 0	790	0 0	550	...	82	11	...	6	...	157	1 4 4	1 8 11	1 7 10						
1,900	0 0	1,948	8 0	2,200	0 0	1,982	...	379	177	...	25	...	738	1 1 9	1 6 8	1 10 1						
200	0 0	200	0 0	200	0 0	406	...	23	25	...	1	...	352	0 7 11	0 8 6	0 9 1						
2,300	0 0	2,324	8 0	3,000	0 0	1,279	...	147	25	...	32	...	961	2 5 6	2 14 11	3 0 2						
500	0 0	514	8 0	700	0 0	560	...	80	...	...	11	...	291	1 4 0	2 4 2	2 5 0				
2,800	0 0	2,842	0 0	2,600	0 0	1,730	...	372	55	...	43	...	601	1 8 1	1 15 8	2 1 8						
500	0 0	500	0 0	780	0 0	338	...	12	14	...	7	...	31	2 1 1	2 2 4	2 4 9						
2,200	0 0	2,218	0 0	3,000	0 0	1,094	...	110	14	...	27	...	833	2 11 11	3 2 8	3 3 6						
536	12 6	564	0 0	600	0 0	510	...	36	106	...	23	...	102	1 2 10	1 11 10	1 14 6						
470	6 0	485	8 0	500	0 0	442	...	20	67	...	2	...	368	1 2 1	1 8 4	1 10 4						
498	0 0	518	0 0	440	0 0	405	...	38	53	...	17	...	243	1 5 1	1 7 5	1 11 4						
475	10 6	482	12 0	430	0 0	659	...	240	84	...	20	...	272	0 15 5	1 5 10	1 7 2						
395	0 0	423	8 0	420	0 0	589	...	188	111	...	29	...	71	0 11 8	1 10 11	2 0 0						
3,000	0 0	3,036	0 0	3,000	0 0	1,692	...	186	59	...	14	...	859	1 12 4	2 0 2	2 1 11						
1,169	0 0	1,202	0 0	1,000	0 0	1,328	...	372	78	...	11	...	41	0 13 1	1 2 11	1 6 1						
950	0 0	972	8 0	1,100	0 0	1,117	...	122	69	...	44	...	222	0 15 9	1 1 8	1 8 7						
350	0 0	350	0 0	400	0 0	695	...	57	12	...	68	...	14	0 9 3	0 16 6	0 11 9						
1,450	0 0	69 12 0	1,300	0 0	1,053	...	...	255	92	...	8	...	190	1 3 9	1 10 4	1 14 1				
250	0 0	256	0 0	450	0 0	293	...	22	25	...	4	...	72	1 2 6	1 11 0	1 14 1						
350	0 0	350	0 0	400	0 0	783	...	99	11	...	81	...	592	0 8 2	0 9 4	0 10 7						
				2,200	0 0	865	...	90	11	...	10	...	677	2 8 8	2 14 0	2 14 8						
				100	0 0	32	...	2	...	...	...	...	30	3 2 0	3 5 4	3 5 4				
				325	0 0	128	...	9	...	...	...	...	107	2 8 8	2 11 8	2 12 10				
				25	0 0	10	...	...	...	...	...	...	9	2 8 0	2 8 0	2 12 5				
1,000	0 0	1,018	0 0	1,100	0 0	797	...	59	127	...	113	...	309	1 6 1	1 7 8	2 2 11						
1,317	0 0	1,322	0 0	1,240	0 0	1,927	...	231	107	...	75	...	168	0 10 4	0 11 2	0 13 2						
1,000	0 0	1,000	0 0	1,800	0 0	645	...	21	9	...	8	...	574	2 12 8	2 14 8	2 15 6						
280	0 0	201	0 0	200	0 0	194	...	7	10	...	25	...	49	1 0 6	1 1 3	1 5 2						
377	0 0	377	1 0	585	0 0	375	...	67	5	...	12	...	127	1 8 11	1 15 10	2 0 10						
				15	0 0	7	...	9	...	...	...	...	5	5 2 2 3	3 0 0	3 0 0				
71,682	13 0	71,305	1 0	82,160	0 0	62,084	2,806	7,292	2,998	563	1,939	20,662	25,774	46,436	1 5 4	1 9 7	1 12 2					
1,500	0 0	77 12 0	1,																			

General pargana statement of areas and revenues of

Pargana.	Number.	Village.	Highest revenue of 1st settlement.	Highest revenue of 2nd settlement.	Highest revenue of 3rd settlement.	Highest revenue of 4th settlement.	Highest revenue of 5th settlement.	Highest revenue of 6th settlement.
				Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
BROKANERY.	1	Athain ... ..	...	225 0 0	420 0 0	820 0 0	950 0 0	1,185 0 0
	2	Illahabas ... ..	...	50 0 0	200 0 0	200 0 0	200 0 0	467 0 0
	3	Baruki ... ..	...	40 0 0	170 0 0	194 0 0	194 0 0	419 0 0
	4	Bhuapur ... ..	...	60 0 0	...	250 0 0	250 0 0	438 0 0
	5	Bhopah ... ..	...	3,400 0 0	...	2,600 0 0	2,800 0 0	2,314 0 0
	6	Bhukarheri ... ..	...	4,000 0 0	...	3,200 0 0	3,865 4 0	4,514 0 0
	7	Bedaheri ... ..	...	...	...	...	325 0 0	395 0 0
	8	Berah Thuru... ..	...	1,350 0 0	...	1,350 0 0	1,400 0 0	1,299 0 0
	9	Berah Sadat mahál Sambalbera ... ..	...	...	...	...	...	...
	10	Ditto ditto Sayyidan ... ..	...	} 858 0 0	858 0 0	1,110 0 0	1,110 0 0	1,538 0 0
	11	Ditto ditto Asgharali ... ..	...		...	...	...	...
	12	Belrah ... ..	...	2,100 0 0	...	1,600 0 0	1,800 0 0	1,663 0 0
	13	Tissah ... ..	...	751 0 0	2,100 0 0	2,100 0 0	2,100 0 0	2,386 0 0
	14	Teorah ... ..	...	400 0 0	400 0 0	400 0 0	400 0 0	2,418 0 0
	15	Chachrauli ... ..	...	1,700 0 0	1,000 0 0	1,000 0 0	950 0 0	1,205 0 0
	16	Chaurawalah ... ..	...	1,100 0 0	1,200 0 0	1,200 0 0	801 0 0	1,167 0 0
	17	Daryabad ... ..	...	155 0 0	350 0 0	300 0 0	300 0 0	470 0 0
	18	Daryapur ... ..	...	50 0 0	200 0 0	200 0 0	200 0 0	228 0 0
	19	Daulatpur ... ..	...	300 0 0	350 0 0	202 0 0	202 0 0	361 0 0
	20	Dhiraheri ... ..	...	580 0 0	865 0 0	865 0 0	865 0 0	1,188 7 0
	21	Raepur ... ..	...	500 0 0	300 0 0	300 0 0	300 0 0	298 0 0
	22	Rahmatpur ... ..	...	1,500 0 0	1,200 0 0	1,200 0 0	900 0 0	860 0 0
	23	Rasulpur ... ..	...	...	...	...	475 0 0	473 0 0
	24	Rahkarah ... ..	...	600 0 0	600 0 0	600 0 0	600 0 0	1,085 0 0
	25	Sukkatar ... ..	...	250 0 0	...	250 0 0	250 0 0	370 0 0
	26	Sukkartari ... ..	...	440 0 0	...	440 0 0	440 0 0	825 0 0
	27	Sikandarpur ... ..	...	1,500 0 0	...	1,325 0 0	1,323 12 0	725 0 0
	28	Sikri ... ..	...	1,000 0 0	...	1,800 0 0	1,800 0 0	2,701 0 0
	29	Shahdarah bangar ... ..	...	20 0 0	500 0 0	500 0 0	350 0 0	411 0 0
	30	Firospur ... ..	...	125 0 0	125 0 0	125 0 0	125 0 0	280 0 0
	31	Kazipur ... ..	...	600 0 0	600 0 0	600 0 0	650 0 0	829 0 0
	32	Kararah mahál Iwaz Ali ... ..	...	...	...	...	...	...
	33	Ditto Fateh Husain ... ..	...	} 900 0 0	900 0 0	900 0 0	900 0 0	1,342 0 0
	34	Ditto Anup Singh ... ..	...		...	...	...	...
	35	Kari ... ..	...	35 0 0	150 0 0	70 0 0	70 0 0	214 0 0
	36	Kasauli ... ..	...	30 0 0	181 0 0	268 0 0	268 0 0	382 0 0
	37	Kishampur ... ..	...	700 0 0	700 0 0	700 0 0	700 0 0	768 0 0
	38	Kakralah ... ..	...	500 0 0	442 0 0	542 0 0	542 0 0	774 0 0
	39	Kakrauli ... ..	...	1,151 0 0	1,151 0 0	1,151 0 0	1,151 0 0	1,358 0 0
	40	Khai khera ... ..	...	250 0 0	250 0 0	250 0 0	250 0 0	430 0 0
	41	Kharpaar ... ..	...	80 0 0	90 0 0	90 0 0	90 0 0	420 0 0
	42	Khokni ... ..	...	680 0 0	400 0 0	400 0 0	400 0 0	475 0 0
	43	Gadlah ... ..	...	1,900 0 0	1,900 0 0	1,900 0 0	1,900 0 0	1,914 0 0
	44	Gadwarah ... ..	...	1,300 0 0	1,200 0 0	1,200 0 0	950 0 0	592 0 0
	45	Lalpur ... ..	...	...	...	...	...	3 0 0
	46	Mahmudpur majraha ... ..	...	1,300 0 0	...	1,300 0 0	1,200 0 0	687 0 0
	47	Málpurah ... ..	...	600 0 0	650 0 0	650 0 0	701 0 0	833 0 0
	48	Mimlakheri ... ..	...	400 0 0	400 0 0	400 0 0	400 0 0	520 0 0
	49	Mornah ... ..	...	...	...	...	455 0 0	746 0 0
	50	Nirgajni ... ..	...	1,600 0 0	1,350 0 0	1,350 0 0	1,100 0 0	781 0 0
	51	Nalherah ... ..	...	1,275 0 0	1,275 0 0	1,272 0 0	1,275 0 0	1,077 0 0
	52	Nalheri ... ..	...	280 0 0	350 0 0	350 0 0	350 0 0	404 0 0
	53	Wasirabad ... ..	...	1,300 0 0	900 0 0	900 0 0	900 0 0	949 0 0
	54	Yusufpur ... ..	...	850 0 0	850 0 0	800 0 0	820 0 0	883 0 0
		Pargana Total ... ..	...	...	...	...	...	48,202 7 0

pargana Bhukarheri, district Mueaffarnagar.

Highest revenue of 7th settlement.			Average of last 5 years.			Proposed Jama.			Total area in acres,			Not Assess- able.		Assessable.							Incidence of present revenue on total area per acre.		Incidence of present revenue on total assessable area per acre.		Incidence of present revenue on total cultivated area per acre.		
												Revenue free.	Otherwise bar- ren.	Culturable.			Cultivated.										
														Old waste.	Groves.	Recent fol- low.	Irrigated.	Dry.	Total cul- tivated.								
Rs. a. p.	Rs. a. p.	Rs. a. p.											Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1,450 0 0	1,467 0 0	2,000 0 0	1,051	...	96	26	4	1	837	87	924	1 14 5	2 1 6	9 2 7													
550 0 0	556 8 0	500 0 0	1,117	...	396	136	...	26	...	559	569	0 7 2	0 11 2	0 14 4													
550 0 0	561 8 0	620 0 0	828	...	73	44	...	1	137	573	710	0 12 0	0 13 2	0 14 0													
600 0 0	608 8 0	720 0 0	1,592	...	551	189	...	1	480	371	851	0 7 3	0 11 1	0 13 8													
2,660 0 0	2,695 0 0	3,360 0 0	1,954	...	321	132	16	21	959	505	1,464	1 10 8	2 0 3	2 3 8													
5,000 0 0	5,155 12 0	7,400 0 0	5,892	219	1,500	826	30	101	2,598	558	3,156	1 4 1	1 12 7	2 5 6													
450 0 0	456 0 0	740 0 0	672	...	62	13	...	...	179	418	597	1 1 7	1 3 5	1 8 0													
1,530 0 0	1,548 0 0	1,800 0 0	1,484	...	149	18	5	3	590	719	1,309	1 3 5	1 5 8	1 6 0													
		870 0 0	887	...	31	3	2	2	192	657	349	0 15 8	1 0 4	1 0 5													
1,850 0 0	1,886 0 0	810 0 0	866	...	95	7	2	4	199	559	758	0 15 0	1 0 10	1 1 1													
		520 0 0	582	...	28	2	6	...	114	432	546	0 14 4	0 15 2	0 15 2													
1,948 0 0	1,985 0 0	2,500 0 0	1,260	13	224	23	14	6	876	104	980	1 15 9	2 7 8	2 8 8													
2,946 0 0	3,018 0 0	4,400 0 0	2,150	...	270	51	22	16	1,576	215	1,791	2 0 9	2 5 10	2 7 4													
2,992 0 0	3,046 0 0	4,200 0 0	2,076	...	169	5	13	5	1,429	455	1,884	2 0 4	2 3 5	2 3 8													
1,400 0 0	1,409 8 0	1,760 0 0	1,397	...	134	64	1	1	557	640	1,197	1 4 3	1 6 4	1 7 6													
1,600 0 0	1,618 0 0	2,300 0 0	1,825	...	124	53	1	6	714	927	1,641	1 4 2	1 5 8	1 6 5													
550 0 0	553 0 0	560 0 0	1,322	...	470	134	3	26	59	630	689	0 6 9	0 10 7	0 13 0													
350 0 0	351 0 0	400 0 0	786	...	298	65	...	6	203	184	387	0 8 6	0 14 0	1 0 7													
440 0 0	440 0 0	800 0 0	502	...	18	10	...	1	299	174	473	1 9 6	1 10 7	1 11 1													
1,150 0 0	1,160 0 0	1,300 0 0	1,042	...	94	32	5	12	455	444	899	1 4 0	1 6 1	1 7 2													
298 0 0	298 0 0	480 0 0	313	...	14	2	...	2	176	19	195	2 4 1	2 6 7	2 7 4													
868 0 0	884 0 0	1,000 0 0	502	...	57	14	8	...	286	137	423	1 15 10	2 4 7	2 5 10													
450 0 0	454 8 0	600 0 0	1,000	...	77	65	...	6	168	684	852	0 9 7	0 10 5	0 11 3													
1,300 0 0	1,313 0 0	2,300 0 0	2,442	...	220	47	...	273	518	1,384	1,902	0 15 1	1 0 7	1 3 4													
320 0 0	330 8 0	360 0 0	1,675	...	596	639	15	11	...	415	415	0 3 5	0 5 5	0 13 11													
1,000 0 0	1,004 12 0	1,440 0 0	2,009	195	341	207	...	95	368	808	1,171	0 11 6	0 15 7	1 3 8													
900 0 0	920 14 0	920 0 0	669	12	161	9	1	2	302	182	484	1 6 0	1 13 9	1 14 5													
2,800 0 0	2,382 12 0	2,300 0 0	5,274	882	1,214	698	6	89	448	1,937	2,385	0 7 0	0 11 7	0 15 6													
410 0 0	412 0 0	410 0 0	544	...	30	33	...	13	11	457	468	0 12 1	0 12 9	0 14 0													
400 0 0	407 8 0	500 0 0	1,364	...	343	495	2	99	64	361	425	0 5 10	0 7 10	1 2 10													
900 0 0	905 0 0	660 0 0	721	...	52	18	1	3	188	459	647	0 14 8	0 15 10	1 0 4													
		1,140 0 0	727	...	51	19	5	2	445	205	650	1 9 2	1 11 3	1 12 1													
1,800 0 0	1,818 0 0	660 0 0	356	...	28	9	...	1	287	31	318	1 13 8	2 0 2	2 1 1													
		600 0 0	355	...	29	21	2	2	224	79	303	1 11 1	1 13 3	1 15 8													
200 0 0	200 0 0	280 0 0	605	...	180	71	...	1	186	217	493	0 6 11	0 8 11	0 10 4													
280 0 0	280 0 0	500 0 0	581	...	34	33	...	10	147	357	504	0 13 9	0 14 8	0 15 9													
800 0 0	808 0 0	1,360 0 0	718	...	42	12	...	2	626	31	657	1 14 6	2 0 5	2 1 1													
325 0 0	337 0 0	1,460 0 0	1,026	...	87	49	11	1	610	268	878	1 6 9	1 9 2	1 10 10													
2,400 0 0	2,468 8 0	3,200 0 0	2,025	...	182	88	13	4	823	975	1,798	1 9 3	1 12 0	1 12 6													
600 0 0	603 8 0	960 0 0	425	...	37	18	...	...	346	22	370	2 4 0	2 7 7	2 9 6													
610 0 0	613 8 0	720 0 0	1,273	...	363	94	...	12	346	458	804	0 9 1	0 12 8	0 14 4													
600 0 0	600 0 0	1,100 0 0	648	...	45	4	...	5	564	30	594	1 11 2	1 13 2	1 13 7													
2,130 0 0	2,166 0 0	2,600 0 0	1,915	...	126	69	8	41	640	1,031	1,711	1 5 9	1 7 4	1 8 11													
600 0 0	618 0 0	700 0 0	451	...	131	6	2	1	211	100	311	1 8 10	2 3 3	2 4 0													
2 0 0	2 0 0	1 0 0	581	579	1	...	...	...	1	...	1	1 0 0	1 0 0	1 0 0													
790 0 0	798 0 0	900 0 0	518	...	95	25	2	13	345	38	383	1 11 10	2 2 2	2 5 7													
1,000 0 0	1,010 0 0	1,340 0 0	675	...	46	27	6	...	577	19	596	1 15 9	2 2 5	2 3 11													
696 0 0	696 0 0	900 0 0	519	...	55	5	3	2	237	167	454	1 11 9	1 15 1	1 15 9													
746 0 0	782 0 0	1,000 0 0	1,108	...	126	23	18	...	249	692	941	0 14 5	1 0 7	1 1 0													
1,000 0 0	1,018 0 0	1,140 0 0	999	...	167	44	2	4	326	456	782	1 2 3	1 5 11	1 7 4													
1,080 0 0	1,109 8 0	1,500 0 0	801	155	62	26	6	1	505	46	551	1 14 0	2 9 3	2 11 7													
450 0 0	450 0 0	740 0 0	770	...	50	15	...	18	187	500	687	0 15 5	1 0 5	1 1 2													
1,159 0 0	1,168 8 0	1,900 0 0	1,072	29	104	31	3	1	644	260	904	1 12 4	2 0 6	2 1 8													
1,015 0 0	1,033 0 0	1,300 0 0	766	...	61	23	1	1	357	323	680	1 9 1	1 11 3	1 12 3													
55,945 0 0	56,907 2 0	74,311 0 0	64,677	2,084	10,257	4,712	239	1,014	23,917	22,354	46,271	1 2 5	1 6 9	1 9 8													

General pargana statement of areas and revenue

Pargan.	Number.	Village.	Highest revenue of 1st settlement.	Highest revenue of 2nd settlement.	Highest revenue of 3rd settlement.	Highest revenue of 4th settlement.	Highest revenue of 5th settlement.	Highest revenue of 6th settlement.
			Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
	1	Antwarah ...	...	1,100 0 0	1,033 0 0	1,150 0 0	1,170 0 0	1,455 0 0
	2	Anti ...	...	...	...	...	...	1,122 0 0
	3	Ahrorah mahal 10 biswas	...	...	...	...	...	...
	4	Ditto ditto 7 biswas	...	...	...	...	...	415 0 0
	5	Ditto ditto 3 biswas	...	...	...	...	...	581 0 0
	6	Basedpur ...	...	...	...	...	...	928 0 0
	7	Ditto Kawali ...	...	...	...	...	...	934 0 0
	8	Basaech ...	...	...	...	...	...	852 0 0
	9	Balehri ...	...	...	...	...	...	1,248 0 0
	10	Bhataurah ...	417 0 0	701 0 0	...	...	...	561 0 0
	11	Bhalwah ...	...	...	...	...	...	972 0 0
	12	Bhandur ...	...	600 0 0	535 0 0	525 0 0	525 0 0	964 0 0
	13	Bera Asa ...	...	900 0 0	800 0 0	800 0 0	800 0 0	871 0 0
	14	Pal ...	...	...	...	...	...	888 0 0
	15	Palri ...	...	...	...	...	...	...
	16	Pamnaoli mahal 18 biswas	...	...	...	...	...	1,466 0 0
	17	Ditto ditto 2 biswas	...	...	...	...	...	611 0 0
	18	Pimorah ...	...	...	...	...	...	1,307 0 0
	19	Talrah ...	...	...	...	...	...	3,882 0 0
	20	Tisang ...	...	...	...	...	...	172 0 0
	21	Tulsipur ...	...	...	...	...	...	1,931 0 0
	22	Jansath ...	...	...	...	...	...	1,016 0 0
	23	Jatwarah ...	...	650 0 0	708 0 0	835 0 0	750 0 0	940 0 0
	24	Jandheri ...	...	...	...	...	...	1,510 0 0
	25	Jauli ...	...	...	...	...	...	684 0 0
	26	Jharerah ...	...	300 0 0	275 0 0	275 0 0	275 0 0	919 0 0
	27	Chitaurah ...	...	...	...	...	...	271 0 0
	28	Chandaurah ...	...	...	...	...	...	216 0 0
	29	Chandauri ...	...	...	...	...	...	437 0 0
	30	Chacharpur ...	...	...	...	...	...	1,516 0 0
	31	Changanwah ...	...	...	...	...	...	210 0 0
	32	Khanpur ...	...	...	...	...	...	1,518 0 0
	33	Dhaeri ...	...	...	...	...	...	576 0 0
	34	Dhakheri ...	...	...	...	...	...	995 0 0
	35	Rataur ...	...	...	...	...	...	893 0 0
	36	Rasulpur Khalwarah	...	...	...	...	...	350 0 0
	37	Rurkali Talibali	...	300 0 0	200 0 0	200 0 0	200 0 0	427 0 0
	38	Ditto Fateh Ali	...	250 0 0	150 0 0	150 0 0	150 0 0	745 0 0
	39	Sadhpur ...	...	...	...	...	...	253 0 0
	40	Salarpur ...	...	325 0 0	350 0 0	350 0 0	1,400 0 0	1,595 0 0
	41	Saidipur ...	...	...	...	...	...	253 0 0
	42	Sikherah ...	438 0 0	405 0 0	597 0 0	597 0 0	597 0 0	1,309 0 0
	43	Katkha ...	...	60 0 0	550 0 0	600 0 0	550 0 0	648 0 0
	44	Kamherah ...	...	...	...	...	...	1,831 0 0
	45	Kawal ...	...	...	...	...	...	1,697 0 0
	46	Kawali mahal Gulam Ali	...	...	...	...	...	...
	47	Ditto ditto Mahbub Ali	...	...	...	...	...	609 0 0
	48	Ditto ditto Yakub Ali	...	...	...	...	...	...
	49	Khartauli mahal Inayat Husain	...	...	...	...	...	...
	50	Ditto ditto Ghulam Ali	...	188 0 0	800 0 0	800 0 0	800 0 0	539 0 0
	51	Ditto ditto Mahbub Ali	...	...	...	...	...	...
	52	Ditto ditto Yakub Ali	...	...	...	...	...	...
	53	Khalwarah ...	...	...	...	...	...	515 0 0
	54	Khujerah ...	...	...	...	...	...	791 0 0
	55	Khokni ...	...	...	...	...	...	542 0 0
	56	Kheri Firozabad	...	...	...	...	...	497 0 0
	57	Kheri Kureshi	...	...	...	...	...	345 0 0
	58	Gola Puttha ...	...	...	...	...	...	499 0 0
	59	Matkah ...	...	...	...	...	...	181 0 0
	60	Mantauri Zabardastpur	...	...	...	...	...	280 0 0
	61	Manwat ...	...	...	...	...	...	230 0 0
	62	Mandaur ...	488 0 0	400 0 0	605 0 0	605 0 0	550 0 0	754 0 0
	63	Mawi Sadat ...	...	...	...	...	...	384 0 0
	64	Mahelki ...	...	...	...	...	...	1,437 0 0
	65	Miranpur ...	...	...	...	...	...	794 0 0
	66	Naglah buzurg	...	...	...	...	...	1,090 7 7
	67	Ditto Charhao	...	...	...	...	...	1,678 0 0
	68	Ditto Rud	...	...	...	...	...	265 0 0
	69	Ditto Kabir	...	...	...	...	...	860 0 0
	70	Ditto Mobarik	...	...	...	...	...	1,102 0 0
	71	Ditto Mahasingh	...	...	1,376 0 0	1,375 0 0	1,001 0 0	1,001 0 0
		Total	...	...	...	...	...	56,152 7 7

of pargana Jauli Janath, district Muzaffarnagar.

Highest revenue of 7th settlement.	Average of last 5 years.	Proposed jama	Total area in acres.	Not ASSESSABLE.		ASSESSABLE.							Incidence of present revenue on total area per acre.	Incidence of present revenue on total assessable area per acre.	Incidence of present revenue on total cultivated area per acre.
				Revenue-free.	Otherwise barren.	Culturable.			Cultivated.						
						Old waste.	Groves.	Recent fallow.	Irrigated.	Dry.	Total cultivated.				
Rs. a. p.	Rs. a. p.	Rs. a. p.										Rs. a. p.	Rs. a. p.	Rs. a. p.	
1,541 0 0	1,542 2 10	1,750 0 0	1,110	...	125	48	21	2	643	273	916	1 9 3	1 12 5	1 14 7	
1,150 0 0	1,150 0 0	1,650 0 0	918	79	74	45	1	...	407	312	719	1 12 9	2 3 0	2 4 9	
...	...	75 0 0	203	...	12	10	...	...	46	135	181	1 3 8	1 4 8	1 6 3
...	...	275 0 0	201	48	8	8	...	...	29	108	137	1 5 8	1 7 0	1 8 4
500 0 0	500 0 0	200 0 0	61	...	3	4	...	...	10	44	54	0 15 11	1 6 1	1 7 4
499 0 0	500 0 0	500 0 0	537	...	55	34	7	2	70	369	439	0 14 11	1 0 7	1 2 3	
1,100 0 0	1,100 0 0	1,550 0 0	565	...	58	1	9	...	488	9	497	2 11 11	3 0 11	3 1 11	
1,100 0 0	1,100 0 0	2,000 0 0	949	...	81	44	3	1	667	153	820	2 1 9	2 4 10	2 7 0	
840 0 0	842 0 0	1,250 0 0	602	50	46	6	7	3	313	177	490	2 1 3	2 7 6	2 8 10	
1,200 0 0	1,200 0 0	1,350 0 0	1,041	...	72	85	9	15	537	323	860	1 4 9	1 6 3	1 9 1	
550 0 0	550 0 0	800 0 0	544	...	61	30	...	3	234	216	450	1 7 6	1 10 6	1 12 5	
912 0 0	912 0 0	900 0 0	1,351	...	95	109	2	41	236	865	1,101	0 10 8	0 11 6	0 12 10	
950 0 0	950 0 0	1,600 0 0	1,043	...	77	51	1	1	356	557	913	1 8 7	1 10 9	1 12 0	
870 0 0	870 0 0	1,000 0 0	575	...	63	15	11	1	313	172	485	1 11 1	1 15 3	2 1 0	
950 0 0	950 0 0	1,100 0 0	1,049	...	129	76	...	35	298	511	809	1 0 9	1 3 2	1 5 9	
...	...	100 0 0	623	...	30	25	3	...	204	347	555	1 12 3	1 13 8	1 15 8	
1,165 0 0	1,165 0 0	900 0 0	63	...	4	4	...	...	20	35	55	1 9 5	1 11 1	1 3 1
700 0 0	700 0 0	900 0 0	911	...	91	102	6	1	263	418	711	0 15 10	1 1 7	1 4 3	
1,100 0 0	1,100 0 0	1,750 0 0	1,014	...	89	3	15	...	584	323	907	1 11 7	1 14 3	1 14 10	
3,895 8 0	3,900 0 0	4,750 0 0	3,792	4	405	258	28	3	889	2,205	3,094	1 4 1	1 6 6	1 8 7	
280 0 0	280 0 0	280 0 0	317	...	12	20	...	1	85	199	284	0 14 2	0 14 8	0 15 9	
2,435 0 0	2,444 12 10	3,200 0 0	1,347	...	203	15	92	2	825	210	1,035	2 6 0	2 12 9	3 1 5	
995 0 0	998 0 0	1,350 0 0	1,386	...	132	105	18	11	550	570	1,120	0 15 7	1 1 2	1 3 3	
1,050 0 0	1,050 0 0	1,600 0 0	698	25	55	35	...	...	565	18	583	2 4 8	2 9 5	2 11 11
1,900 0 0	1,900 0 0	2,500 0 0	3,304	143	247	119	15	74	826	1,777	2,603	0 12 1	0 14 3	0 15 4	
650 0 0	650 0 0	1,000 0 0	1,279	...	69	136	2	31	160	881	1,041	0 12 6	0 13 3	0 15 4	
950 0 0	950 0 0	1,450 0 0	771	...	167	24	14	4	408	154	562	1 14 1	2 6 5	2 9 5	
230 0 0	250 0 0	350 0 0	253	...	24	13	...	...	100	116	216	1 6 2	1 8 5	1 9 17
275 0 0	275 0 0	550 0 0	367	...	12	27	...	1	164	143	327	1 8 6	1 8 9	1 10 11	
400 0 0	400 0 0	500 0 0	313	...	32	12	...	...	67	212	269	1 9 7	1 12 5	1 13 9
1,502 0 0	1,504 12 10	2,500 0 0	1,535	...	112	31	14	1	1,224	153	1,377	1 11 1	1 13 3	1 14 3	
400 0 0	400 0 0	500 0 0	433	73	30	37	...	...	79	234	313	1 2 6	1 7 6	1 9 7
1,548 0 0	1,549 3 2	2,100 0 0	3,469	...	242	930	5	50	502	1,749	2,251	0 9 8	0 10 5	0 14 11	
800 0 0	800 0 0	750 0 0	1,109	...	194	17	2	25	187	714	871	0 10 10	0 13 1	0 13 9	
995 0 0	995 0 0	1,650 0 0	901	25	87	16	1	...	713	59	772	1 13 4	2 1 6	2 2 2	
800 0 0	800 0 0	900 0 0	959	56	90	104	...	12	114	583	697	0 15 0	1 1 9	1 4 8	
399 0 0	399 9 7	750 0 0	389	48	19	16	...	...	280	26	306	1 14 10	2 5 3	2 7 3
450 0 0	450 0 0	850 0 0	345	...	16	1	...	1	324	3	327	2 7 5	2 9 4	2 9 7	
691 0 0	692 12 10	1,100 0 0	664	...	41	30	...	...	317	276	593	1 10 6	1 12 3	1 13 8
1,399 0 0	1,399 9 7	1,400 0 0	1,856	...	207	74	3	16	319	1,237	1,556	0 12 1	0 13 2	0 14 5	
349 8 0	350 0 0	450 0 0	385	...	34	15	4	1	53	278	331	1 2 8	1 4 6	1 5 9	
1,350 0 0	1,350 0 0	1,900 0 0	1,595	422	69	39	3	9	736	318	1,054	1 3 1	1 11 6	1 12 10	
800 0 0	800 0 0	1,300 0 0	1,220	...	46	14	2	16	471	671	1,142	1 1 1	1 1 9	1 2 3	
1,847 0 0	1,848 12 10	2,400 0 0	2,774	...	269	122	5	214	526	1,638	2,164	0 13 10	0 15 4	1 1 5	
2,000 0 0	2,000 0 0	2,750 0 0	1,969	...	160	28	32	63	696	980	1,676	1 6 4	1 8 4	1 10 3	
...	...	1,140 0 0	411	...	28	2	3	...	873	5	378	2 12 5	2 15 7	3 0 3	
735 0 0	735 0 0	80 0 0	26	...	...	...	...	...	26	...	26	3 1 3	3 1 3	3 1 3
...	...	80 0 0	27	...	1	...	...	...	26	...	26	2 15 5	3 1 3	3 1 3
690 0 0	600 0 0	760 0 0	531	...	198	23	...	...	266	154	410	1 3 3	1 12 1	1 13 3
...	...	30 0 0	14	...	2	...	...	...	12	...	12	2 2 3	2 8 0	2 8 0
...	...	30 0 0	14	...	2	...	...	...	12	...	12	2 2 3	2 8 0	2 8 0
...	...	30 0 0	13	...	1	...	...	...	12	...	12	2 4 11	2 8 0	2 8 0
500 0 0	500 0 0	1,000 0 0	406	...	24	3	...	...	352	27	379	2 7 5	2 9 11	2 10 3
787 0 0	787 12 10	1,250 0 0	836	...	64	15	11	1	433	32	745	1 7 11	1 9 11	1 10 10	
450 0 0	450 0 0	500 0 0	357	...	30	35	5	1	196	90	286	1 6 5	1 8 6	1 12 0	
898 0 0	899 8 2	1,250 0 0	1,385	...	161	37	13	3	826	795	1,121	0 15 0	1 1 0	1 1 10	
300 0 0	300 0 0	300 0 0	414	...	30	23	5	2	65	289	354	0 11 7	0 12 6	0 13 7	
400 0 0	400 0 0	650 0 0	314	...	46	5	1	...	214	48	262	2 6 1	2 6 10	2 7 8	
200 0 0	200 0 0	300 0 0	267	...	14	6	2	28	88	119	207	1 2 8	1 3 9	1 7 2	
249 0 0	250 0 0	300 0 0	318	...	17	26	1	2	27	245	272	0 15 1	0 15 11	1 1 8	
230 0 0	230 0 0	230 0 0	400	...	21	5	...	...	...	374	374	0 9 2	0 9 9	0 9 10
750 0 0	750 0 0	1,000 0 0	635	162	39	15	1	...	371	47	418	1 9 2	2 4 10	2 6 3	
441 0 0	442 12 10	700 0 0	415	...	28	13	...	9	222	143	365	1 11 0	1 12 11	1 14 8	
1,600 0 0	1,600 0 0	2,400 0 0	1,413	...	149	38	22	1	732	470	1,202	1 11 2	1 14 6	1 15 11	
550 0 0	550 0 0	650 0 0	321	...	33	9	...	...	135	144	279	2 0 5	2 4 1	2 5 3
1,300 0 0	1,300 0 0	2,300 0 0	2,702	...	414	76	...	95	910	1,207	2,117	0 13 7	1 0 1	1 1 4	
2,043 8 0	2,047 9 7	3,000 0 0	1,411	...	83	22	5	1	1,095	203	1,297	2 3 0	2 4 2	2 5 0	
200 0 0	200 0 0	250 0 0	225	...	16	4	4	6	64	131	193	1 1 9	1 3 2	1 4 6	
850 0 0	850 0 0	1,100 0 0	482	...	73	4	5	...	392	8	400	2 4 6	2 11 0	2 12 0	
1,250 0 0	1,250 0 0	2,000 0 0	1,303	...	180	24	5	2	740	351	1,091	1 8 7	1 12 6	1 13 4	
900 0 0	900 0 0	1,000 0 0	494	...	39	22	5	2	284	132	416	2 0 5	2 3 5	2 6 6	
58,481 8 0	58,522 12 11	81,110 0 0	61,963	1,135	5,934	3,353	429	793	24,215	26,074	50,319	1 5 0	1 7 8	1 9	

General Pargana Statement of Areas and Revenue

Pargana.	Number.	Villages.	Highest revenue of 1st settle- ment.	Highest revenue of 2nd settle- ment.	Highest revenue of 3rd settle- ment.	Highest revenue of 4th settle- ment.	Highest revenue of 5th settle- ment.	Highest revenue of 6th settle- ment.
			Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
	1	Ajltpur	...	...	...	...	...	180 0 0
	2	Islāmābād	...	...	...	...	...	622 0 0
	3	Akbarpur	...	...	...	...	...	621 0 0
	4	Amchauli	...	...	...	...	...	1,336 0 0
	5	Bahpur, Azizpur	...	...	...	...	...	457 0 0
	6	Barsu	...	...	...	...	...	1,144 0 0
	7	Boarah khurd	...	...	...	...	...	519 0 0
	8	Boarah kalān	...	...	...	...	...	663 4 0
	9	Bopara Hosenpur	...	...	...	...	...	1,731 0 0
	10	Bhāngi	...	...	...	...	...	896 0 0
	11	Bhainai	...	...	...	...	...	4,539 0 0
	12	Bhoptheri	...	...	...	...	...	833 7 0
	13	Begharaspur	...	...	...	...	...	508 0 0
	14	Palrah	...	...	...	...	...	267 0 0
	15	Puttha	...	...	...	...	...	319 0 0
	16	Pipalherah, Yusufpur	...	...	...	...	...	1,255 0 0
	17	Tajpur	...	...	...	...	...	683 0 0
	18	Tabitah mahāl, 12 biswas	...	...	...	...	...	699 0 0
	19	Tabitah mahāl, 8 biswas	...	...	...	...	...	1,076 0 0
	20	Titaurah	...	...	...	...	...	764 0 0
	21	Tigāin Shāhbāpur	...	...	...	...	...	559 0 0
	22	Jawan	...	...	...	...	...	1,135 0 0
	23	Jasaulah	...	...	...	...	...	585 0 0
	24	Jandheri	...	...	400 0 0	600 0 0	635 0 0	287 0 0
	25	Johrah	180 0 0	180 0 0	182 0 0	180 0 0	200 0 0	669 0 0
	26	Jahāngirpur	...	...	...	...	...	1,312 0 0
	27	Chāndasmand	...	...	...	...	...	43 0 0
	28	Chauri mahāl, Nawāb Azmat Ali Khān,	...	...	...	...	...	459 0 0
	29	Chauri mahāl, Yāsi Sām	...	...	...	...	...	1,327 0 0
	30	Chitaurah	...	...	...	...	...	226 0 0
	31	Chalsinah	...	...	...	...	...	529 0 0
	32	Habibpur	...	...	...	...	...	284 0 0
	33	Khānjahānpur	315 0 0	375 0 0	220 0 0	250 0 0	375 0 0	669 0 0
	34	Khanūnpur	...	...	...	...	...	1,643 0 0
	35	Dahaur	...	...	...	...	...	323 0 0
	36	Dudaheri	...	...	...	...	...	511 0 0
	37	Dudhli	...	...	...	...	...	578 0 0
	38	Rampur mahāl, 3	...	...	...	...	...	303 0 0
	39	Rampur mahāl, 4	...	...	...	...	...	655 0 0
	40	Rampur Nagli	...	...	...	...	...	138 0 0
	41	Rostampur	...	...	...	...	...	578 0 0
	42	Rukanpur	...	...	...	...	...	1,282 0 0
	43	Satheri	...	...	...	...	...	647 0 0
	44	Saras Rasulpur	...	...	...	...	...	446 0 0
	45	Sirdhan	...	...	...	...	...	...
	46	Sikandarpur khurd	...	...	250 0 0	350 0 0	450 0 0	...
	47	Sikandarpur kalān	...	...	...	...	...	...
	48	Sikhrerah mahāl, 10-8	...	...	...	...	...	...
	49	Sikhrerah mahāl, 3-5	...	...	...	...	...	362 0 0
	50	Sikhrerah mahāl, 3-7	...	...	...	...	...	...
	51	Sikhrerah mahāl, 2-10	...	...	...	...	...	...
	52	Simali	...	...	...	...	...	1,036 0 0
	53	Sontah Abdullahnagar	...	...	...	...	...	1,353 0 0
	54	Shāhpur	...	...	...	...	...	333 0 0
	55	Shekhpur	...	...	...	...	...	348 0 0
	56	Sherpur	...	...	...	...	...	733 0 0
	57	Ambarpur	...	...	...	...	...	856 0 0
	58	Ghalibpur	...	...	500 0 0	...	...	823 0 0
	59	Fahimpur khurd	...	...	...	...	...	519 0 0
	60	Fahimpur kalān	347 8 0	347 8 0	...	...	...	552 0 0
	61	Kadhli	800 0 0	1,100 0 0	400 0 0	800 0 0	1,000 0 0	1,141 0 0
	62	Kakrula	...	...	...	...	...	558 0 0
	63	Khataulah	...	...	...	...	...	344 12 0
	64	Khātāuli	...	...	...	...	...	1,577 14 0
	65	Kheri T'gan	...	...	...	...	...	675 0 0
	66	Kheri Bangaran	...	...	...	...	...	1,188 0 0
	67	Kailsodah kalān mahāl, Amin-ud-din Hasan.	...	...	...	...	...	...
	68	Ditto mahāl Aftab Ali	...	...	...	...	...	...
	69	Ditto mahāl Amani Bagham	...	...	...	...	...	...
	70	Ditto mahāl Amjad-un-nisa	...	...	...	...	...	2,376 0 0
	71	Ditto mahāl Parwarish Ali	...	...	...	...	...	...
	72	Ditto mahāl Zulf-un-nisa	...	...	...	...	...	...
	73	Ditto mahāl Talib Ali	...	...	...	...	...	...

of pargana Khātauli, district Musaffarnagar.

Highest revenue of 7th settle- ment.	Average of last five years.		Proposed jams.		Total area in acres.	Not		ASSESSABLE.						Incidence of present revenue on total area per acre.	Incidence of present revenue on total assessable area per acre.	Incidence of present revenue on total cultivated area per acre.
						Revenue-free.	Otherwise barren.	Culturable.			Cultivated.					
								Old waste.	Groves.	Recent fallow.	Irrigated.	Dry.	Total cultivated.			
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
200 0 0	200 0 0	300 0 0	277 138 12	1	...	...	...	...	...	...	...	...	2 5 10	2 6 5	2 6 5
700 0 0	676 0 0	1,000 0 0	772 76 83	48	...	...	...	...	...	...	...	...	1 10 1	1 13 4	1 13 4
900 0 0	898 3 2	1,200 0 0	559 ... 28	19	...	...	...	...	...	...	...	...	2 4 2	2 6 0	2 6 0
1,150 0 0	1,150 0 0	1,050 0 0	1,180 ... 147	29	...	...	...	...	...	...	...	...	1 0 3	1 1 2	1 1 2
370 0 0	370 0 0	550 0 0	432 ... 12	182	...	...	...	...	...	...	...	...	1 4 11	2 6 7	2 6 7
1,400 0 0	1,400 0 0	2,500 0 0	1,405 170 96	12	...	...	...	...	...	...	...	...	2 3 1	2 4 2	2 4 2
700 0 0	700 0 0	1,000 0 0	562 48 37	26	...	...	...	...	...	...	...	...	2 1 7	2 4 0	2 4 0
700 0 0	700 0 0	950 0 0	697 148 132	21	...	...	...	...	...	...	...	...	2 4 5	2 7 7	2 7 7
1,700 0 0	1,696 0 0	2,000 0 0	2,221 178 265	212	...	...	...	...	...	...	...	...	1 2 0	1 4 11	1 4 11
1,100 0 0	1,100 0 0	2,200 0 0	829 ... 90	34	...	...	...	...	...	...	...	...	2 14 11	3 1 4	3 1 4
4,000 0 0	3,875 6 5	4,000 0 0	1,678 69 301	32	...	...	...	...	...	...	...	...	3 1 0	3 4 6	3 4 6
1,050 0 0	1,050 0 0	1,500 0 0	998 ... 83	66	...	...	...	...	...	...	...	...	1 10 3	1 13 2	1 13 2
700 0 0	700 0 0	850 0 0	1,239 178 147	179	...	...	...	...	...	...	...	...	0 14 1	1 1 8	1 1 8
230 0 0	230 0 0	300 0 0	212 ... 43	6	...	...	...	...	...	...	...	...	1 12 5	1 13 8	1 13 8
320 0 0	320 0 0	450 0 0	228 27 15	1	...	...	...	...	...	...	...	...	2 6 9	2 7 4	2 7 4
1,200 0 0	1,200 0 0	1,600 0 0	955 ... 66	308	...	...	...	...	...	...	...	...	1 12 10	2 6 7	2 6 7
650 0 0	650 0 0	750 0 0	397 ... 36	7	...	...	...	...	...	...	...	...	2 2 2	2 3 9	2 3 9
600 0 0	587 0 0	450 0 0	224 ... 19	11	...	...	...	...	...	...	...	...	2 3 4	2 5 8	2 5 8
1,200 0 0	1,179 0 0	1,400 0 0	839 ... 47	115	...	...	...	...	...	...	...	...	1 12 4	2 2 1	2 2 1
700 0 0	700 0 0	850 0 0	321 38 18	15	...	...	...	...	...	...	...	...	3 3 4	3 6 7	3 6 7
450 0 0	450 0 0	600 0 0	545 ... 37	74	...	...	...	...	...	...	...	...	2 11 1	1 3 7	1 3 7
1,000 0 0	1,000 0 0	1,350 0 0	808 ... 86	90	...	...	...	...	...	...	...	...	1 14 0	2 3 4	2 3 4
585 0 0	585 0 0	800 0 0	664 ... 77	108	...	...	...	...	...	...	...	...	1 5 11	1 12 9	1 12 9
400 0 0	400 0 0	750 0 0	330 ... 46	3	...	...	...	...	...	...	...	...	2 10 3	2 11 2	2 11 2
750 0 0	723 6 5	1,300 0 0	869 162 82	12	...	...	...	...	...	...	...	...	2 1 2	2 2 1	2 2 1
1,050 0 0	1,050 0 0	1,400 0 0	1,237 369 78	81	...	...	...	...	...	...	...	...	1 12 4	2 0 6	2 0 6
85 0 0	85 0 0	70 0 0	96 ... 3	32	...	...	...	...	...	...	...	...	0 12 1	1 2 2	1 2 2
460 0 0	460 0 0	559 0 0	565 ... 37	26	...	...	...	...	...	...	...	...	0 12 8	1 4 0	1 4 0
973 0 0	973 0 0	1,300 0 0	978 ... 145	109	...	...	...	...	...	...	...	...	1 5 3	1 9 0	1 14 3
195 0 0	195 0 0	150 0 0	311 ... 19	50	...	...	...	...	...	...	...	...	0 7 9	0 8 3	0 12 5
600 0 0	590 6 5	750 0 0	691 189 62	27	...	...	...	...	...	...	...	...	4 4 4	2 3 9	2 3 9
250 0 0	246 0 0	310 0 0	317 51 21	41	...	...	...	...	...	...	...	...	1 8 1	1 11 7	1 11 7
660 0 0	660 0 0	750 0 0	525 64 89	37	...	...	...	...	...	...	...	...	6 10 1	1 15 5	1 15 5
1,500 0 0	1,500 0 0	1,850 0 0	724 33 72	24	...	...	...	...	...	...	...	...	2 8 11	2 15 10	2 15 10
350 0 0	350 0 0	700 0 0	363 74 25	11	...	...	...	...	...	...	...	...	1 14 10	2 10 8	2 12 10
400 0 0	400 0 0	390 0 0	478 5 167	74	...	...	...	...	...	...	...	...	7 9 0	0 12 3	1 1 6
650 0 0	650 0 0	1,250 0 0	541 38 81	5	...	...	...	...	...	...	...	...	0 8 2	0 11 2	0 15 9
320 0 0	320 0 0	450 0 0	206 ... 20	3	...	...	...	...	...	...	...	...	2 5 0	2 15 8	2 15 8
590 0 0	590 0 0	750 0 0	266 26 13	2	...	...	...	...	...	...	...	...	2 11 3	2 6 9	2 8 3
220 0 0	220 0 0	350 0 0	1,423 1,288 17	2	...	...	...	...	...	...	...	...	1 13 1	2 4 10	2 5 10
700 0 0	700 0 0	1,200 0 0	530 ... 118	13	...	...	...	...	...	...	...	...	2 9 6	2 15 5	2 15 5
1,100 0 0	1,100 0 0	1,400 0 0	568 49 69	23	...	...	...	...	...	...	...	...	2 4 3	2 14 7	2 14 7
580 0 0	580 0 0	600 0 0	645 7 70	3	...	...	...	...	...	...	...	...	2 7 5	3 1 5	3 4 8
609 0 0	600 0 0	900 0 0	1,083 308 110	10	...	...	...	...	...	...	...	...	0 14 11	1 0 11	1 1 1
		310 0 0	206 ... 11	25	...	...	...	...	...	...	...	...	0 13 4	1 5 8	1 0 2
		110 0 0	96 ... 1	31	...	...	...	...	...	...	...	...	8 1	1 9 5	1 14 9
		75 0 0	55 ... 1	...	...	...	...	...	...	...	...	...	1 2 4	1 2 6	1 12 10
		85 0 0	38 ... 1	14	...	...	...	...	...	...	...	...	1 5 10	1 6 8	1 7 6
		1,200 0 0	1,868 ... 231	96	...	...	...	...	...	...	...	...	0 10 3	0 11 9	0 13 1
800 0 0	800 0 0	1,900 0 0	938 139 77	17	...	...	...	...	...	...	...	...	2 0 5	2 10 8	2 14 0
1,450 0 0	1,450 0 0	500 0 0	422 39 58	38	...	...	...	...	...	...	...	...	2 11 1	8 7 1	1 11 11
450 0 0	454 0 0	550 0 0	244 ... 45	7	...	...	...	...	...	...	...	...	2 4 1	2 12 3	2 14 10
385 0 0	372 9 7	1,650 0 0	767 21 80	17	...	...	...	...	...	...	...	...	2 2 5	2 7 7	2 8 9
1,000 0 0	960 0 0	750 0 0	770 ... 87	81	...	...	...	...	...	...	...	...	0 15 7	1 1 7	1 4 7
850 0 0	850 0 0	850 0 0	771 ... 45	181	...	...	...	...	...	...	...	...	1 8 1	1 3 9	1 10 2
700 0 0	700 0 0	400 0 0	413 29 63	118	...	...	...	...	...	...	...	...	0 15 6	1 3 11	2 0 4
300 0 0	300 0 0	1,100 0 0	447 ... 60	7	...	...	...	...	...	...	...	...	2 7 4	2 13 6	2 15 2
675 0 0	675 0 0	1,500 0 0	1,482 ... 167	64	...	...	...	...	...	...	...	...	1 0 2	1 2 3	1 3 4
1,250 0 0	1,250 0 0	500 0 0	452 41 16	141	...	...	...	...	...	...	...	...	1 1 9	1 4 2	1 15 6
465 0 0	465 0 0	550 0 0	462 120 169	1	...	...	...	...	...	...	...	...	1 3 1	3 0 1	3 1 2
345 0 0	345 0 0	2,008 689	247 22 53	33	...	...	...	...	...	...	...	...	1 3 2	3 11 2	2 7 9
2,793 0 0	1,734 14 11	950 0 0	815 48 137	19	...	...	...	...	...	...	...	...	1 2 8	2 1 10	2 10 2
750 0 0	750 0 0	1,400 0 0	642 51 68	5	...	...	...	...	...	...	...	...	2 2 11	2 10 10	2 12 0
1,100 0 0	1,100 0 0	450 0 0	238 ... 23	3	...	...	...	...	...	...	...	...	1 14 3	2 1 6	2 2 1
		475 0 0	223 ... 27	6	...	...	...	...	...	...	...	...	1 15 11	2 2 10	2 4 2
		360 0 0	255 ... 28	22	...	...	...	...	...	...	...	...	1 6 7	1 10 7	1 15 6
		105 0 0	79 ... 3	3	...	...	...	...	...	...	...	...	1 5 8	1 6 1	1 8 4
		120 0 0	78 ... 8	...	...	...	...	...	...	...	...	...	1 8 7	1 1 5	1 12 3
		115 0 0	80 ... 8	3	...	...	...	...	...	...	...	...	1 6 10	1 9 3	1 10 9
		675 0 0	576 ... 22	14	...	...	...	...	...	...	...	...	2 0	1 5 10	1 7 9
1,945 0 0	1,925 0 0															

General Pargana Statement of Areas and Revenues

Pargana.	Number.	Villages.	Highest revenue of 1st settle- ment.	Highest revenue of 2nd settle- ment.	Highest revenue of 3rd settle- ment.	Highest revenue of 4th settle- ment.	Highest revenue of 5th settle- ment.	Highest revenue of 6th settle- ment.
			Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
KHATAULI (concluded.)	74	Gaoni Asdullahpur ...	...	...	...	...	...	620 0 0
	75	Gadanpurah mahál, Khurshid Hasan,	}	...	...	...	...	512 0 0
	76	Ditto mahál, Amani Begam ...		...	...	...	...	199 0 0
	77	Ditto mahál, Azim-ud-din Hasan,		...	...	...	...	1,209 0 0
	78	Gangdharah ...	...	...	...	...	...	906 0 0
	79	Gangdhari ...	...	...	...	...	...	437 0 0
	80	Ladpur ...	...	...	...	...	...	592 0 0
	81	Lishorah Umarpur ...	150 0 0	150 0 0	195 0 0	195 0 0	195 0 0	355 0 0
	82	Lihorah mahál, 15 biswas ...	...	...	...	...	...	586 0 0
	83	Lihorah mahál, 5 biswas...	...	...	...	...	...	1,011 0 0
	84	Mubarikpur ...	...	...	...	...	...	508 0 0
	85	Matheri ...	...	...	...	...	...	973 0 0
	86	Majhadpur ...	...	...	...	...	...	487 0 0
	87	Muhl-ud-dinpur ...	...	...	...	...	...	1,994 0 0
	88	Marh Karimpur ...	...	...	...	...	...	450 0 0
	89	Mandawar ...	...	...	...	...	...	188 0 0
	90	Mansurpur ...	...	...	...	...	...	523 0 0
	91	Munauwarpur ...	347 8 0	347 8 0	...	...	...	594 0 0
	92	Munauwarpur Masra Naolah	...	...	...	...	...	3,536 0 0
	93	Mochri ...	...	...	...	...	...	818 0 0
	94	Moghpur or Hamidpur ...	...	...	...	...	...	222 0 0
	95	Naolah ...	...	...	...	...	...	...
	96	Nunan ...	...	...	...	...	...	...
	97	Yahiapur ...	345 0 0	350 0 0	105 0 0	145 0 0	145 0 0	...
		Total, Khálisa ...	...	...	...	...	...	65,913 14 0
		<i>Revenue-free estates.</i>						
	98	Ibrahimpur ...	...	...	...	...	...	361 0 0
	99	Phulat ...	...	...	...	...	...	...
	100	Kailaodah khurd, mahál 13-13	}	...	...	...	...	444 0 0
	101	Ditto mahál, 6-7		...	...	...	...	328 0 0
	102	Loharah ...		...	...	...	...	...
	103	Muhammadpur ...	...	...	...	...	...	222 0 0
	104	Mahmudpur ...	...	...	...	...	...	...
		Total ...	...	...	...	...	...	1,355 0 0
		PARGANA TOTAL ...	...	...	...	...	...	67,28 14 0

of pargana Khatauli, district Musaffarnagar—(concluded).

Highest revenue of 7th settle- ment.	Average of last five years.	Proposed jama.	Total area in acres.	Not Assessable.		Assessable.							Incidence of present revenue on total area per acre.	Incidence of present revenue on total assessable area per acre.	Incidence of present revenue on total cultivated area per acre.
				Revenue-free.	Otherwise barren.	Culturable.			Cultivated.						
						Old waste.	Groves.	Recent fallow.	Irrigated.	Dry.	Total cultivated.				
Rs. a. p.	Rs. a. p.	Rs. a. p.										Rs. a. p.	Rs. a. p.	Rs. a. p.	
580 0 0	520 0 0	1,000 0 0	808	156	32	27			76	6	324	1 10 8	2 5 9	3 9 7	
420 0 0	420 0 0	368 0 0	250	...	14	21			77	134	211	1 7 0	1 8 5	1 11 4	
		110 0 0	63	...	3	4			82	24	56	1 11 7	1 12 10	1 15 5	
		110 0 0	63	...	3	1			45	14	59	1 11 11	1 13 4	1 13 10	
200 0 0	200 0 0	400 0 0	265	78	17	8			45	15	160	1 8 2	2 4 9	2 8 0	
1,200 0 0	1,191 3 2	1,400 0 0	668	115	57	10			17	34	451	2 1 6	2 13 0	3 1 8	
1,000 0 0	980 12 10	1,200 0 0	499	25	61	5			86	3	389	2 8 6	2 14 6	3 1 2	
650 0 0	620 5 5	900 0 0	439	81	40	14			79	25	304	2 0 11	3 13 4	2 15 5	
		554 0 0	217	...	40	...			68	...	168	2 9 7	3 3 8	3 5 9	
550 0 0	550 0 0	166 0 0	68	...	8	...			66	...	56	2 11 9	3 1 7	3 5 2	
420 0 0	411 0 0	650 0 0	276	23	37	14			89	...	190	2 5 8	3 2 6	3 6 9	
500 0 0	500 0 0	600 0 0	221	8	49	5			34	...	224	2 1 0	2 9 0	2 10 10	
350 0 0	350 0 0	1,000 0 0	785	...	59	55			59	400	659	1 4 5	1 6 0	1 8 8	
500 0 0	500 0 0	600 0 0	274	...	36	...			31	46	227	2 3 0	2 8 8	2 10 3	
1,100 0 0	1,067 0 0	1,500 0 0	640	20	62	54			90	...	496	2 5 6	2 11 0	3 0 4	
485 0 0	485 0 0	550 0 0	746	...	9	1			...	784	784	0 11 10	0 11 11	0 12 6	
2,350 0 0	2,350 0 0	2,750 0 0	2,425	505	269	30			10	494	1,604	1 8 8	2 4 4	2 5 4	
480 0 0	480 0 0	700 0 0	585	168	42	11			21	126	247	1 8 2	1 13 10	2 0 3	
184 0 0	184 0 0	350 0 0	128	...	24	6			17	51	168	1 12 5	2 0 2	2 1 4	
460 0 0	460 0 0	650 0 0	458	...	31	22			92	320	402	1 6 8	1 8 2	1 9 11	
325 0 0	325 0 0	1,300 0 0	769	...	103	13			73	110	583	1 12 7	2 2 5	2 3 8	
3,300 0 0	3,294 9 7	3,800 0 0	2,618	159	334	122			18	870	1,938	1 7 3	1 11 5	1 15 4	
2,150 0 0	2,150 0 0	1,750 0 0	687	...	112	8			58	22	575	2 8 0	2 14 6	3 0 8	
400 0 0	400 0 0	450 0 0	226	54	35	7			19	21	180	1 9 3	2 4 8	2 8 0	
66,911 0 0	65,854 14 11	82,106 0 0	59,687	6,370	6,408	3,499			14	17,029	43,323	1 7 7	1 14 0	2 1 9	
278 0 0	...	400 0 0	252	...					11	25	188	1 8 10	2 0 10	2 2 6	
1,522 0 0	...	2,750 0 0	1,072	...					16	109	902	2 9 0	2 12 7	3 0 9	
444 0 0	...	379 0 0	245	...					18	77	215	1 8 9	1 10 7	1 12 2	
304 0 0	...	121 0 0	76	...					5	16	71	1 9 10	1 11 3	1 11 3	
271 0 0	...	350 0 0	216	...					3	65	198	1 9 11	1 11 5	1 12 2	
296 0 0	...	1,400 0 0	550	...					5	7	482	2 8 9	2 15 4	3 0 4	
	...	400 0 0	189	...					11	...	151	2 1 10	2 2 3	2 10 6	
4,016 0 0	...	5,800 0 0	2,606	...	314	30	70	7	1,889	296	2,185	2 3 7	2 8 6	2 10 5	
70,217 0 0	65,854 14 11	95,906 0 0	62,298	6,370	6,722	3,529	787	607	26,178	16,285	44,463	1 8 1	1 14 6	2 1 10	

General Fargana statement of areas and Revenues of

Pargana.	Number.	Village.	Highest revenue of 1st settlement.	Highest revenue of 2nd settlement.	Highest revenue of 3rd settlement.	Highest revenue of 4th settlement.	Highest revenue of 5th settlement.	Highest revenue of 6th settlement.
			Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
BHUMAH SAMBALHERAH.	1	Babrah ...	...	279 0 0	328 0 0	290 0 0	175 0 0	299 0 0
	2	Bahadarpur ...	...	...	...	...	125 0 0	588 0 0
	3	Bhāmāh Mahāl, 12 biswas	...	...	625 0 0	801 0 0	801 0 0	1,302 0 0
	4	Ditto ditto 8 ditto	...	1,066 0 0	460 0 0	501 0 0	501 0 0	551 0 0
	5	Puthi Ibrāhimpur ...	...	...	1,575 0 0	1,360 0 0	1,450 0 0	1,528 0 0
	6	Tiparpur ...	...	600 0 0	384 0 0	244 0 0	244 0 0	307 0 0
	7	Tiraulah ...	...	...	1,483 0 0	1,580 0 0	1,675 0 0	1,000 0 0
	8	Nikanlah ...	...	...	610 0 0	476 0 0	476 0 0	470 0 0
	9	Tandherah ...	...	1,600 0 0	2,000 0 0	2,000 0 0	2,250 0 0	2,345 0 0
	10	Jarwar ...	...	400 0 0	255 0 0	440 0 0	440 0 0	700 0 0
	11	Jamulpur ...	...	250 0 0	217 0 0	217 0 0	247 0 0	247 0 0
	12	Churialah ...	...	1,000 0 0	983 0 0	805 0 0	805 0 0	1,344 0 0
	13	Haidarpur ...	...	300 0 0	300 0 0	290 0 0	280 0 0	280 0 0
	14	Digdherā Mahāl Moberik Husain	...	...	...	...	...	...
	15	Digdherā Mahāl Hamal	...	103 0 0	156 0 0	210 0 0	210 0 0	269 0 0
	16	Rajpur Khari	...	137 0 0	162 0 0	205 0 0	205 0 0	275 0 0
	17	Ditto kalan	...	670 0 0	693 0 0	640 0 0	640 0 0	688 0 0
	18	Rasulpur ...	...	375 0 0	430 0 0	430 0 0	430 0 0	429 0 0
	19	Sarbarahpur or Tharheri	...	...	...	300 0 0	500 0 0	500 0 0
	20	Sikandarpur ...	...	217 0 0	188 0 0	101 0 0	101 0 0	637 0 0
	21	Sikbretah Mahāl, 10 biswas	...	...	107 0 0	110 0 0	110 0 0	214 0 0
	22	Ditto ditto, 5 ditto	...	120 0 0	86 0 0	65 0 0	65 0 0	114 0 0
	23	Ditto ditto, 5 ditto	...	...	70 0 0	95 0 0	95 0 0	144 0 0
	24	Samanah ditto, 14 ditto	...	...	...	127 0 0	376 0 0	365 0 0
	25	Ditto ditto, 5 ditto	...	...	...	...	...	...
	26	Sambalherah Mahāl Sayyidan	...	775 0 0	879 0 0	1,100 0 0	1,460 0 0	1,951 0 0
	27	Ditto ditto Hukumat Rae	...	...	...	...	...	...
	28	Sohnjanf ...	...	...	1,500 0 0	1,267 0 0	1,400 0 0	1,456 0 0
	29	Shaupuri ...	...	...	...	400 0 0	352 0 0	352 0 0
	30	Kasimpur Bhumah	...	...	...	151 0 0	176 0 0	235 0 0
	31	Kasimpur Kholaf	...	635 0 0	431 0 0	504 0 0	515 0 0	506 0 0
	32	Kutabpur ...	...	...	...	1,225 0 0	1,196 0 0	1,196 0 0
	33	Kithausah ...	...	...	...	...	352 0 0	852 0 0
	34	Katie ...	...	700 0 0	515 0 0	510 0 0	515 0 0	1,133 0 0
	35	Kurai ...	...	425 0 0	425 0 0	425 0 0	1,071 0 0	1,071 0 0
	36	Kheri Saras ...	...	...	1,801 0 0	1,600 0 0	1,752 0 0	2,048 0 0
	37	Kallapur Jasmour	...	300 0 0	500 0 0	345 0 0	365 0 0	741 0 0
	38	Ghataen Janubi	...	...	1,668 0 0	2,034 0 0	2,250 0 0	2,250 0 0
	39	Ditto Shimali	...	...	...	1,887 0 0	1,650 0 0	2,350 0 0
	40	Makhampur ...	...	132 0 0	63 0 0	130 0 0	130 0 0	155 0 0
	41	Mubarikpur Mahāl, 17 biswas	...	345 0 0	390 0 0	320 0 0	330 0 0	335 0 0
	42	Ditto ditto, 3 ditto	...	...	...	...	...	...
	43	Majherah ...	...	680 0 0	816 0 0	827 0 0	777 0 0	862 0 0
	44	Mahmudpur Mahāl, 14 biswas	...	132 0 0	106 0 0	201 0 0	275 0 0	312 0 0
	45	Ditto ditto, 6 ditto	...	...	...	...	201 0 0	139 0 0
	46	Miranpur ...	...	...	...	...	...	26 0 0
	47	Nizampur Mahāl, 14 biswas	...	900 0 0	650 0 0	901 0 0	700 0 0	620 0 0
	48	Ditto ditto, 5 ditto	...	...	...	...	...	...
	49	Naglah Khepar	...	...	...	250 0 0	524 0 0	324 0 0
	50	Nunikhherah ...	...	...	775 0 0	875 0 0	745 0 0	734 0 0
	51	Bashimpur Mahāl, 7 biswas	...	350 0 0	350 0 0	350 0 0	350 0 0	503 0 0
	52	Ditto ditto, 3 ditto	...	...	...	336 0 0	336 0 0	358 0 0
	53	Ditto ditto, 3 ditto	...	...	275 0 0	205 0 0	205 0 0	361 0 0
	54	Ditto ditto, 2 ditto	...	...	...	164 0 0	168 0 0	160 0 0
	55	Ditto ditto, 2 ditto	...	...	...	112 0 0	112 0 0	147 0 0
	56	Ditto ditto, 1 ditto	...	60 0 0	100 0 0	100 0 0	100 0 0	101 0 0
	57	Ditto ditto, 1 ditto	...	...	...	...	112 0 0	112 0 0
	58	Ditto ditto, 1 ditto	...	...	...	...	...	62 0 0
	59	Ditto ditto, 1 ditto	...	...	...	47 0 0	47 0 0	62 0 0
Total			...	...	...	...	...	36,390 0 0

pargana Bhumah Sambalherah, district Muzaffarnagar.

Highest revenue of 7th settlement.	Average of last 5 years.	Proposed jama.	Total area in acres.	Not assessable.		Assessable.						Incidence of present Revenue on total area per acre.	Incidence of present Revenue on total assessable area per acre.	Incidence of present Revenue on total cultivated area per acre.
				Revenue free.	Otherwise barren.	Culturable.			Cultivated.					
						Old waste.	Groves.	Recent fallow.	Irrigated.	Dry.	Total cultivated.			
Rs. a. p.	Rs. a. p.	Rs. a. p.										Rs. a. p.	Rs. a. p.	Rs. a. p.
230 0 0	230 0 0	400 0 0	319	...	25	10	...	2	4	278	282	1 4 1	1 5 9	1 6 6
600 0 0	612 8 0	770 0 0	323	...	26	22	3	...	186	56	272	2 3 8	2 7 2	2 10 4
1,494 0 0	1,519 4 0	1,880 0 0	1,962	...	308	27	4	33	461	1,207	1,668	0 15 3	1 1 2	1 1 7
743 0 0	759 8 0	1,040 0 0	1,188	...	162	22	1	6	246	740	1,006	0 14 0	1 0 4	1 0 6
1,000 0 0	1,018 2 0	1,100 0 0	1,224	...	339	87	2	...	791	791	0 14 5	1 4 1	1 6 3	1 6 3
300 0 0	300 0 0	400 0 0	837	...	340	67	...	43	98	389	387	0 7 8	0 12 10	1 0 6
1,075 0 0	1,094 15 0	1,190 0 0	453	...	48	4	12	...	380	9	389	2 10 0	3 0 5	3 0 11
500 0 0	503 0 0	660 0 0	1,278	...	611	77	4	89	...	497	497	0 8 3	0 15 11	1 5 3
1,945 0 0	1,963 0 0	2,000 0 0	2,218	...	153	26	1	1	873	1,165	2,038	1 5 8	1 7 3	1 7 7
650 0 0	668 0 0	1,000 0 0	1,236	...	67	29	3	3	134	1,100	1,234	0 12 0	0 12 8	0 12 11
250 0 0	250 0 0	600 0 0	783	...	34	2	...	2	19	725	744	0 12 3	0 12 10	0 12 11
1425 0 0	1,443 0 0	1,500 0 0	2,222	...	123	36	5	33	224	1,801	2,025	0 10 10	0 11 6	0 11 9
250 0 0	255 8 0	440 0 0	1,037	...	516	105	1	...	159	356	415	0 6 9	0 13 6	1 0 11
325 0 0	325 0 0	280 0 0	267	...	36	8	1	...	84	154	238	0 15 10	1 2 0	1 2 6
350 0 0	350 0 0	800 0 0	541	...	34	8	1	...	88	156	244	0 15 8	1 1 9	1 2 3
680 0 0	716 0 0	920 0 0	382	...	32	7	...	7	232	279	511	1 1 9	1 2 6	1 2 9
370 0 0	388 0 0	530 0 0	512	...	64	11	9	...	295	3	298	2 6 6	2 15 8	3 1 5
700 0 0	710 0 0	1,000 0 0	966	...	80	2	5	9	26	390	416	1 0 3	1 3 4	1 3 10
900 0 0	918 0 0	1,200 0 0	1,275	...	74	26	1	58	359	448	807	1 0 7	1 1 11	1 3 2
230 0 0	227 9 0	230 0 0	535	...	8	13	...	...	...	1,181	1,181	1 0 4	1 1 5	1 1 7
140 0 0	143 8 0	150 0 0	386	...	220	27	...	67	...	211	211	0 7 0	0 12 1	1 0 0
144 0 0	148 8 0	150 0 0	340	...	157	3	2	72	...	152	152	0 6 8	0 10 7	0 15 9
275 0 0	275 0 0	330 0 0	772	...	117	24	...	42	...	167	167	0 7 1	0 10 9	0 15 3
1,794 0 0	1,848 0 0	2,300 0 0	2,963	...	403	87	...	5	...	275	275	0 6 8	0 13 11	1 2 7
1,350 0 0	1,368 0 0	1,440 0 0	986	...	148	12	...	8	...	89	89	0 5 7	0 13 3	1 0 2
265 0 0	278 0 0	340 0 0	805	...	275	43	7	36	672	1,930	2,602	0 12 5	0 13 9	0 14 1
350 0 0	356 15 0	460 0 0	745	...	6	1	...	1	37	115	145	0 14 8	0 15 5	0 15 5
500 0 0	518 0 0	820 0 0	1,441	...	71	86	2	9	427	358	815	1 10 7	1 12 10	2 0 1
1,350 0 0	1,386 9 0	1,700 0 0	1,660	...	418	20	...	32	...	335	335	0 6 9	0 14 1	1 0 1
750 0 0	858 2 0	1,040 0 0	782	...	27	13	7	155	81	446	527	0 9 11	0 10 7	0 11 6
950 0 0	963 8 0	1,100 0 0	1,638	...	687	154	2	9	...	590	590	0 5 9	0 11 1	0 13 5
1,250 0 0	1,250 0 0	1,560 0 0	893	...	108	9	3	5	438	1,097	1,635	1 0 5	1 1 7	1 1 9
1,746 0 0	1,964 0 0	2,300 0 0	2,233	...	259	9	21	11	182	398	480	1 5 3	2 1 3	2 2 8
800 0 0	805 0 0	940 0 0	2,659	...	84	12	...	3	106	1,427	1,533	0 10 9	0 11 4	0 11 6
1,750 0 0	1,974 8 0	1,800 0 0	816	...	62	35	15	27	480	274	754	1 11 11	1 14 7	2 0 2
1,800 0 0	1,829 8 0	1,900 0 0	764	...	240	40	4	7	492	1,450	1,942	1 0 7	1 2 6	1 2 11
150 0 0	150 0 0	160 0 0	261	...	1,503	115	...	45	...	1,196	1,196	0 5 3	0 11 0	0 12 5
385 0 0	385 0 0	460 0 0	390	...	55	55	7	1	424	274	698	2 2 11	2 6 2	2 9 3
1,045 0 0	1,081 0 0	1,400 0 0	1,843	...	61	19	1	...	545	138	682	2 7 10	2 21 4	2 12 6
450 0 0	450 0 0	440 0 0	734	...	24	4	...	...	6	332	337	0 9 1	0 9 11	0 10 2
185 0 0	185 0 0	180 0 0	293	...	27	7	9	2	...	345	345	1 2 10	1 4 9	1 5 4
40 0 0	40 0 0	40 0 0	20	...	...	...	...	...	...	56	56	1 6 5	1 6 10	1 6 10
820 0 0	856 0 0	620 0 0	1,042	...	208	68	24	25	316	1,205	1,521	0 12 2	0 13 11	0 14 7
500 0 0	509 0 0	600 0 0	627	...	202	111	...	31	...	39	390	0 9 7	0 13 3	1 1 5
850 0 0	861 8 0	1,340 0 0	699	...	99	14	...	42	...	138	138	0 9 10	0 14 10	1 3 6
650 0 0	674 3 0	960 0 0	815	...	91	9	...	...	19	1	20	0 10 8	2 12 2	3 12 11
258 0 0	271 8 0	400 0 0	296	...	392	62	...	8	161	419	580	0 9 6	0 15 1	1 1 1
300 0 0	311 2 0	480 0 0	804	...	142	25	...	3	123	94	217	0 11 7	1 2 3	1 3 2
225 0 0	233 4 0	300 0 0	224	...	24	27	...	...	151	425	576	0 15 4	0 15 11	1 0 2
160 0 0	165 10 0	260 0 0	139	...	43	36	12	3	419	177	596	1 15 1	2 1 9	2 3 6
70 0 0	72 9 0	100 0 0	75	...	113	27	13	2	208	452	660	1 2 10	1 6 4	1 7 2
112 0 0	116 3 0	160 0 0	92	...	17	1	...	4	54	220	274	1 5 7	1 6 11	1 7 4
40 0 0	41 12 0	50 0 0	44	...	28	9	6	...	115	142	257	1 9 3	1 12 10	1 13 11
25 0 0	25 15 0	26 0 0	43	...	23	1	2	1	40	157	197	1 5 5	1 8 1	1 8 4
				...	3	1	...	...	70	65	135	1 13 11	1 14 7	1 14 10
				...	...	...	...	...	3	66	69	1 5 4	1 7 1	1 7 1
				...	...	...	...	...	52	24	86	1 11 10	1 12 9	1 13 5
				...	...	...	...	...	...	44	44	1 2 2	1 2 2	1 2 2
				...	...	...	...	...	...	39	39	0 9 8	0 9 8	0 10 5
35,691 0 0	36,844 15 0	45,866 0 0	48,922	52	9,388	1,755	191	938	9,499	27,100	36,599	0 15 0	1 2 8	1 4 0

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A hand-drawn map of the Kherisarae region, showing various towns and geographical features. The map is oriented with North at the top. Key locations include Majherah, Miranpur, Hashimpur, Kherisarae, and several smaller towns like Babrah, Sikherah, and Tihaulah. The map also shows a network of roads and a river system.

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ORDERS OF GOVERNMENT.

No. 36A. OF 1882.

RESOLUTION.

REVENUE DEPARTMENT.

Dated Allahabad, the 7th February, 1882.

READ :—

Letter from the Secretary to the Board of Revenue, North-Western Provinces, No. 1325A., dated the 12th December, 1873, submitting the settlement report of the Muzaffarnagar district and reviewing the results in the parganas not included in the Ganges Canal tract.

Letter from the Secretary to the Board of Revenue, North-Western Provinces, No. $\frac{219}{1-99}$, dated the 28th April, 1881, submitting the final settlement report on the Ganges Canal tract in the Muzaffarnagar district.

OBSERVATIONS.—The revision of the settlement of the district of Muzaffarnagar has occupied longer time than that of any other district in the province. Begun in 1861 it was not completed until 1875, and Mr. Cadell's settlement report was not received until 1878 by the Board of Revenue. The causes of the delay will hereafter be more fully noticed in connection with the history of settlement operations. Here it is sufficient to say that the whole district was re-assessed between the years 1861-64 by the Collectors for the time being and their Assistants, and the settlement reported in 1867 to the Government for confirmation. At that time a scheme for the permanent settlement of the Province was under discussion, and in considering the applicability of such a measure the Lieutenant-Governor, Sir William Muir, was led to question the adequacy of the lately completed settlement of Muzaffarnagar. Mr. Cadell was specially deputed to the district to report on this matter, and in 1869, in consequence of the facts disclosed by this investigation, the assessment of the eastern portion of the district was cancelled, and Mr. Cadell appointed to re-assess it. This he completed at the end of 1874, though his final report was not submitted until three years afterwards. The settlement of the western half of the district, which had been made in 1861-64, was allowed to stand, and the revenue has since been collected on its basis. But it has never received the formal sanction of the Government, and though reported for confirmation by the Board in 1873, orders were delayed until Mr. Cadell's report on his settlement operations in the eastern tract should be submitted.

2. The materials for a general review of the economic condition of the district and of the settlement lately completed are, though ample in bulk, of very varied quality. For the western part of the district there are the reports of the assessing officers on the several parganas; a brief sketch of the general settlement of the district by the Collector; the notes made by Mr. Cadell in reporting on the applicability of a permanent settlement; and a full review by the Board of Revenue of the result of the re-settlement. Unfortunately many of these papers are from twenty to fifteen years old, and the Board's review was written eight years ago. The information therein contained is not only imperfect and scattered in character but is also to a great extent obsolete. Subjects which find a prominent place in a modern settlement report are not so much as referred to. Thus there are no statistics as to the proportion of

land respectively held by occupancy-tenants, and tenants-at-will; nor as to the amount of land held by the several castes; nor as to the average size of estates or the proportion of small to large properties. Peculiarities of tenures, whether proprietary or otherwise, are barely touched on, and the historical antecedents of the district are despatched with the briefest notice.

3. For the eastern part of the district Mr. Cadell's report is all that could be wished. He has gathered up the results of his work in a clear and compact form, and has sketched the past fiscal history and present condition of the tract with sufficient fulness.

4. The present review must partake of the general character of the materials. It is impossible to criticise the settlement as a whole, for there are not one but several settlements. In the western parganas Mr. Keene worked on one method, Mr. Auckland Colvin on another: in the east Mr. Cadell adopted a third. Again, it is difficult to present a distinct picture of the whole district at any one period. Messrs. Keene and Colvin made their assessments when the effects of the mutiny were still visible, when the great famine of 1860-61 was a thing of yesterday, and when the influence of the canal and the railways was but half felt and inadequately appreciated. Mr. Cadell brought his work to a close in a period of abundant harvests and high prices, when the district had thoroughly realised the commanding position which two canals and the railway have given it.

5. It will thus be necessary to deal separately with Messrs. Keene and Colvin's settlement of the western tract, which the Board reviewed in 1873, and with Mr. Cadell's settlement of the eastern tract, which the Board have only now reported to Government. But a few preliminary remarks may be made as to the physical features and general condition of the district and its past history.

6. The district of Muzaffarnagar is of oblong shape, wedged in between the Ganges and Jumna on the east and west and by the districts of Saháranpur and Meerut on the north and south. Its form is determined by the two great rivers, as, like the more northerly district of Saháranpur, it occupies the watershed between them. The flow of both rivers is due south from the hills, and as the watershed dips in the same direction, the several smaller streams which traverse it have their courses roughly parallel to the main rivers. The district is thus divided into a number of narrow strips or doabs. Starting from the west there is the Jumna-Kirsani doab, next the Kirsani-Hindan, next the Hindan-Kali; and to the extreme east the Kali-Gangetic doab.

7. The total area of the district, according to the latest returns, is 1,654 square miles. Of this 930 square miles lie to the west of the Kali Nadi and comprise the area settled by Messrs. Keene and Colvin. The remaining 724 square miles to the east of the Kali Nadi form the eastern tract, which came under Mr. Cadell's revision. But of this over 150

* Pargana Gordhanpur.
 " Par Chapar (a portion).
 " Bhukarheri (do.)
 " Bhuma Sambalhera (do.)

square miles are lowlying* (khádir) lands in the valley of the Ganges, which, on account of the precarious character of the cultivation, have been excluded from a regular settlement.

Mr. Cadell's report therefore deals with an area of only 569 square miles.

8. Compared with the central plain of the Gangetic doab, the district of Muzaffarnagar is naturally arid and sandy. The numerous streams which traverse it have caused great inequalities of soil, and the uniformity which characterises Aligarh or Meerut is here wanting. The riverain or *khádir* area is, as noticed above, very large. The whole of pargana Gordhanpur, which forms the north-west corner of the district, is a great unhealthy swamp, the vestige probably of an old bed of the Ganges. In the north-east angle similar marshes, though to a less extent, have been caused by the Jumna in the desolate pargana of Bidauli. Elsewhere the *khádir* lands of both rivers are as a rule highly fertile, though liable to injury from the percolation of canal water. The Hindan, the Kirsani, and the Kali Nadi are similarly fringed with riverain lands, usually of extreme fertility. The soil of the uplands is a light loam, locally known as *rausli*, shading imperceptibly into more sandy soils (*bhúr*), and here and there interspersed with dunes of pure sand. A district belt of sand, for instance, stretches from the town of Muzaffarnagar in a south-easterly direction to the border of the Meerut district. The *rausli* corresponds with the *dúmat* of Aligarh or Mainpuri, and the *piliya* of Muttra, save that it probably contains more sand, and is therefore somewhat lighter in texture. With manure and water it becomes, as the patient industry of the Jats show, very fertile, but without these adjuncts the outturn is poor and precarious.

9. The water-level and the facilities for well-making vary greatly in different parts. Speaking generally, water lies lowest in the northern parganas, and the sub-soil is there most treacherous. Earthen wells are difficult to make and masonry wells costly. Before the introduction of canal irrigation the northern border of the district must have been treeless and waterless, and peculiarly sensitive to drought. In the south of the district the water level is generally close to the surface, and earthen wells can be easily sunk. Even without canals the parganas of Khatauli Shikárpur, Budhána, Kándhla, and parts of Shámli and Kairana could be protected against droughts by well irrigation.

The canals, however, have revolutionised the agriculture of the district, throwing wells where they existed out of use and fertilising tracts once almost waste and unproductive. On the east the Eastern Jumna Canal irrigates the country between the Jumna river and the Kirsani; on the west the Ganges Canal commands the tract between the Kali Nadi and the Ganges. Thus the central portion of the district, which comprises the Kirsani-Hindan and the Hindan-Kali doabs, is alone unirrigated by a canal. Of the parganas into which this tract is divided, Chartháwal, Bujhera, and Thána Bháwan to the north are scantily supplied with wells: the southern parganas are better off, Budhana especially being noted as one of the most highly cultivated portions of the district. The Deoband branch of the Ganges Canal, which is now under construction, will irrigate the doab between the Hindan and the Kali Nadi, and thus protect the dry tracts of Chartháwal and Bujhera.

10. The statistics of irrigation for the district are less perfect than might be wished. For the western tract (excluding Gordhanpur and the other valley lands of the Ganges) Mr. Cadell gives the irrigated area as 122,632 acres out of a total cultivated area of 263,997. Of this 113,694

acres are irrigated by the Ganges Canal and 7,989 by wells. For the eastern tract the Board's figures show 221,833 acres irrigated out of a total cultivated area of 372,829 acres. But these figures refer to 1864, and since then much new land has been brought under the plough.

11. The communications of the district are good: the eastern tract is traversed by the Scinde, Panjáb, and Delhi Railway, and fairly good roads connect the district with Rohilkhand on one side and the Panjáb on the other. The town of Muzaffarnagar has become the centre of a large grain and sugar trade, and the exports by road and rail are considerable. The population has increased 10 per cent. within the last nine years. In 1872 it was 690,082, and according to the recent census it is now 758,215. This gives an average of 452 to the square mile, but if allowance be made for the thinly-peopled swamps of Gordhanpur and the dhák thickets of Bidauli, the average number of inhabitants to the square mile cannot be under 500. But even on this computation the district is by no means densely populated, and in many parts the demand for labor exceeds the supply.

Jat Communities
12. The chief cultivating castes are Jats, Tagas, Rajputs, and Gujars, though the Chamars, here as elsewhere, preponderate in numbers, and as laborers and farm hands actually perform the greater part of the work. The flourishing communities of Jats which are met with throughout the district are one of its peculiar and most pleasing features. Sometimes they own the land; more often, having lost their rights in the last days of native or the early days of British rule, they have sunk to the condition of tenants. But in either case their industry and skill are apparent in rich crops and high class cultivation. These Jat brotherhoods are most numerous in the southern part of the district, and Mr. Cadell plausibly conjectures that they immigrated from the south and dispossessed the Rajput and the Taga septs, by whom the land was held. In the north the Rajput and Taga, along with the indolent and cattle-lifting Gujar, predominate. This is one of the reasons why the northern parganas appear so inferior to the southern, for many of the now most fertile Jat villages in the south must have been founded in what originally was little better than a sand waste.

13. The history of the eastern tract is fully given by Mr. Cadell, and his narrative is generally applicable to the whole district. The distinctive feature of the local history is the rise and decay of a powerful Muhammadan clan known as the Sayyids of the Barha. Settling in the south-east of the district several generations before the time of Akbar, they rose in many instances to great eminence in the imperial service. Their lands increased with their palace influence and their repute, and before the downfall of the Mughal empire they had acquired by grant, purchase, or the voluntary acts of the village communities themselves most of the western half of the district. The Jat and Taga brotherhoods in the decay of the empire were glad to purchase protection by "commending" themselves to a strong Sayyid house. The Sayyids, however, as a rule left the village communities to manage their own affairs, contenting themselves with levying the revenues through the village headmen or *mukaddams*. Thus the village communities preserved their organization under

their Sayyid masters until the second half of the eighteenth century opened with inroads of Rohillas, Mahrattas, and Sikhs. A Gujar chief, the founder of the Landhaura Raj, established himself in the north, another Gujar family ousted the Sayyids in the south, and an Afghan adventurer seized the east. The Jat and Taga brotherhoods passed into the hands of new masters. British rule brought back the Sayyids from exile, and the first years of the century witnessed a desperate struggle between the Sayyids, the Gujar chieftains, and the village communities for the proprietary ownership of the soil. In the south-east the Sayyids regained in a great measure their possessions, and the quasi-proprietary rights of the village communities were ignored and extinguished by the civil courts. In the north the Gujar semi-feudal principality was broken up, and the village brotherhoods recognised as owners of their lands. Mr. Cadell shows that many conflicting claims could have been best settled in the early days of British rule by the recognition of a superior and inferior proprietary right. A sub-settlement would have effectively preserved the privileges which the village communities had been accustomed to enjoy under the Sayyids. The neglect to do this has reduced in many cases the true owners of the soil into the position of mere tenants, and matters have not improved where the money-lender has stepped into the place of the Sayyid.

At the conquest the Sayyids in the eastern tract owned two-thirds of the area, or 239,000 acres out of 323,000. Through extravagance, indolence, and litigation they have lost one-half of this. The trading classes have acquired 102,398 acres, and the rest is owned by Jats, Tagas, Rajputs, and other cultivating castes. The eastern tract is thus owned in nearly equal parts by village communities, Sayyids, and traders. For the tract west of the Kali Nadi figures are not available.

14. The strength of occupancy rights in this district is remarkable. In the eastern tract half the cultivated area is held by occupancy tenants, and twenty per cent. more by proprietors as *sir*. Tenants-at-will thus occupy only 30 per cent. of the area. Though precise figures are wanting for the rest of the district, it is believed that occupancy tenants there are equally numerous. The fact is the more welcome as compensating in a measure for the loss by many old village brotherhoods of their unquestionable proprietary rights in the early settlements. The occupancy tenant in Muzaffarnagar is often a substantial man. His average holding is 12 acres, half of which is irrigated by the canal, and his rent does not exceed Rs. 3-8-0 an acre or Rs. 42 for the holding. He usually has an acre or two under sugarcane or fine rice, from which he pays his rent. In Aligarh or Agra the standard of rent is higher and the holdings much smaller. Nor is the tenant-at-will as badly off as elsewhere. The average size of his holding is 8 acres, and his rent is even lower than that paid by the occupancy tenant. This, however, is doubtless due to the fact that the best lands are held by the latter class of tenants. The development of canal irrigation and the comparative thinness of the population have made the district a distinctly prosperous one. "The generally comfortable circumstances of the people," says Mr. Cadell, "are shown by the goodness of their clothing and of their

food. The laborer in Muzaffarnagar dresses better than the average petty proprietor of the eastern districts, and wheat now forms a much larger proportion than of old of the food of the lowest classes."

15. Such, however, was not the case when settlement operations began in 1861. "The district was in a state of great depression. It had taken a prominent part in the disturbances of 1857, and had suffered terribly in consequence." The census showed that the population had fallen off since 1853, and the settlement officer's reports draw a graphic picture of the desolation and wretchedness which the country presented. The prostration caused by the mutiny had been further intensified by the drought of 1860 and the cholera outbreak of 1861. Many persons emigrated and a large number died of destitution and sickness. Land fell out of cultivation and villages were deserted. It is necessary to dwell on this, as it explains the leniency which the assessing officers showed. In the eastern part of the district the assessments were, as it will hereafter be shown, not only lenient but from the first very inadequate. In the western tract, while they leaned to the side of leniency, they were not inadequate to the conditions under which they were made, and were therefore allowed to stand. To begin with the western tract to which Mr. Cadell's revision did not extend, the figures given in para. 10 of the Board's review of 1873 show the comparative area of this portion of the district at the time of the former settlement and at the time of revision in 1861-64:—

		Total.	Barren.	Revenue-free.	Culturable.	Fallow.	Cultivated.
		Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1841	...	586,258	79,202	40,449	103,758	...	362,849
In 1861-64	...	594,525	86,476	27,155	80,012	28,053	372,829

The increase in the cultivated area had therefore been very slight: the culturable waste was fully 100,000 acres: of the cultivated area 267,346 acres at the former settlement had been returned as irrigated: in 1861-64 the irrigated area was only 221,833 acres. If these figures were to be believed, irrigation had actually decreased. In reality this was not the case, as the former return of irrigation was admitted to be wrong. It was clear, however, that neither in extension of cultivation nor of irrigation had any great advance been made since 1840. The work of revision began in 1861, when two parganas, Budhána and Shikárpur, were assessed by Mr. Keene. In 1863 Mr. Martin assessed Baghra. The remaining seven parganas were settled by Mr. Colvin between 1861 and 1864. In pargana Kándhla alone was the demand at all perceptibly increased: in two others a slight increase was taken: while in the remaining seven the settlement resulted in a decrease. The land revenue of the previous settlement had been Rs. 7,60,692 for the ten parganas. The revised demand was Rs. 7,41,773. The net loss on the tract has thus amounted to Rs. 18,919 a year from the time the revised assessments came into force.

16. Pargana Budhána was the first pargana assessed by Mr. Keene. Lying on the Hindan, it is beyond the reach of the Eastern Jumna Canal, and until the Deoband Branch of the Ganges Canal is completed, it depends entirely on well irrigation. The spring level is in most places near the

surface and wells have been very generally constructed by the cultivating communities. But the pargana had suffered in the drought, and Mr. Keene considered the expiring settlement to have been severe. He reduced the revenue from Rs. 75,017 to Rs. 69,846, or by Rs. 5,171. The former demand had been assessed at a full two-thirds of the assets, and the assets in 1840 were estimated at Rs. 90,024. Mr. Keene's rates gave a rental of Rs. 1,39,692, an increase of Rs. 49,668, or of 55 per cent. Cultivation had increased by only 1,614 acres, or 4·8 per cent.; but he considered that prices had risen by 25 per cent., and that this justified the large increase in his assumed rental. In 1869, eight years after Mr. Keene's assessment, Mr. Cadell inspected this pargana in connection with the permanent settlement scheme. He reported that "the decrease in the assessment was in some measure due to the half-asset principle of assessment, but most of the loss to the Government revenue is unquestionably owing to excessive reduction, especially in the large estate of Jaola. * * * Besides estates like Jaola there are some of those held by bhaiáchára communities which unquestionably required relief, but in the case of which the relief has been so enormous as to leave doubt as to whether the present assessment is fitted to be other than a temporary one."

17. Pargana Shikárpur was next assessed by Mr. Keene. This pargana lies north of Budhána, and is divided by the Hindan into two unequal portions. The tract east of the Hindan is at present entirely dependent on well irrigation, though it will eventually benefit from the Deoband Branch of the Ganges Canal. That west of the Hindan is irrigated by the Eastern Jumna Canal. The pargana throughout is highly cultivated by prosperous Jat communities, and Mr. Keene found an increase of 10 per cent. in the cultivated area. Well irrigation had also increased, but exact statistics were not obtainable. The expiring settlement he considered to have been on the whole a fair one, on the basis of 65 per cent. of the existing assets. But it had lain too heavily on some of the cultivating brotherhoods. The assumed rental in 1840 had been about Rs. 1,42,000. Mr. Keene's revision at half assets assumed a rental of Rs. 2,06,600, or an increase of 45 per cent. He did not think the increase of cultivation and irrigation and the rise of 25 per cent. in average prices justified a larger increase. He admitted that he showed some consideration to the hard-working communities, which in former settlements had been severely taxed on account of their industry. "I found officials recommending high assessments on particular estates simply and solely because they were held by wealthy individuals or by industrious tribes." Against this method of assessment he rightly set his face. Mr. Cadell, in reporting in 1870 on the eligibility of estates in this pargana for a permanent settlement, showed that Mr. Keene's assessments, if generally moderate, were "only in very exceptional instances inadequate." But mistaken estimates of the value of an estate are occasionally made by even the best settlement officers, and a few such cases do not impair the general soundness of Mr. Keene's settlement. Bidauli, the next pargana taken in hand, was assessed by Mr. Colvin in 1861, under Mr. Keene's supervision. It is a desolate tract of swamp and thicket in the extreme north-west of the district, inhabited by indolent Gujars and predatory Bhaurias. For years it had been one of the most unsatisfactory

parganas of the district. It suffered from over-assessment and was further injuriously affected by the troubles of 1857-58 and the famine of 1861. "Some village sites," wrote Mr. Colvin, "show evident traces of having formed the centres of considerable life: in almost every village is to be found the decaying fort of some decayed family. Wells constructed with masonry are abundant: but while the old wells are neglected, few new ones have been built. Little by little the population has slunk away as the settlement of 1838 became more and more intolerable. * * * The inhabitants, finding that even active cultivation will barely meet the revenue, have, as a rule, ceased to interest themselves in agriculture." Out of a total area of 55,616 acres only 20,544 acres were under cultivation, and the cultivated area had decreased by one-sixth. The revenue of the former settlement was Rs. 37,905. Mr. Colvin granted reductions amounting to Rs. 8,780, and the revised demand stands at Rs. 29,125. His assessments were admittedly low, and on this account engagements for twenty years only were concluded with the landholders. As the 20 years expire in 1882, it would be possible then to revise Mr. Colvin's assessments. The Board, however, recommend that the settlement be allowed to run for the ordinary term of thirty years. With this recommendation His Honor quite concurs, as he has ascertained that the pargana is still in an extremely bad condition, and that a revision of settlement would secure little or no increase of revenue.

18. Parganas Chartháwal, Thána Bháwan, Jhinjana, Shámli, Kairána, and Kándhla were next assessed, between 1862 and 1863, by Mr. Colvin. It will be most convenient to consider them in the order they were assessed:

19. *Thána Bháwan*.—The Kirsani river, which intersects this pargana, divides it into two very distinct portions: the eastern tract is fully irrigated by the Eastern Jumna Canal; the western tract lies in the Doab, between the Kirsani and the Hindan, where irrigation is insufficient. Mr. Colvin found the pargana suffering from the effects of the mutiny and the famine. Thána Bháwan itself was "a city of empty houses:" the waste area was very large, and "the drought and disturbances had caused a great exodus of cultivators." Cultivation had actually decreased: in the former settlement there had been 30,361 acres under the plough: in 1861 there were only 27,692 acres. More than half the total area of the pargana was waste, though 12,000 acres of the waste were capable of cultivation. Mr. Colvin's revision increased the revenue from Rs. 56,244 to Rs. 57,081, or by Rs. 837. He admits that "his demand was perhaps a little below what the pargana is equal to. But had I put up a full demand, few villages could have paid it for the first four or five years, and the effect would probably have been to hinder the return of absentees, if not to promote the exodus." In commenting on the large extent of untilled land, especially in the unirrigated estates to the east of the Kirsani, he remarks that "much of the so-called culturable land is rain land, of a nature which at present prices would not repay cultivation, and such of it as might repay cultivation would only do so after wells had been dug and the landowners were too unenterprising to make an outlay of this nature on any large scale." Of the utility of the Eastern Jumna Canal in the western tract he spoke doubtfully: it led to

over-cropping, the land was deteriorating, the villages bordering the canal were much infected with reh. Altogether the pargana was not in 1861 in a thriving state. Nor had matters improved when Mr. Cadell inspected it in 1869 : the increase in the cultivated area was almost imperceptible, and the effect of the canal was as bad as ever. Over-irrigation had so injured much land as to throw it out of cultivation, and the western tract was deteriorating rather than improving. He considered Mr. Colvin's assessment "as a rule just both to Government and the people."

20. *Jhinjhana*.—This pargana lies between Thána Bháwan on the east and Bidauli on the west, and partakes of the physical characteristics of both. On the south-east side it is fully irrigated by the Eastern Jumna Canal: on the north-west it is as ill-cultivated and desolate as Bidauli. Like Thána Bháwan, it had suffered severely in the mutiny, and the cultivated area had decreased from 29,575 to 25,011 acres. Of the total area of 60,117 acres 19,000 were either fallows or culturable waste. "The jamas," Mr. Colvin says, "have been taken up promptly, and I hope that by a moderate demand I have assisted in opening up a prosperous future for the landholders of this pargana."

21. *Chartháwal*, the next pargana assessed, lies to the east of Thána Bháwan, and is intersected by the Hindan. One-half therefore lies in the Kirsani-Hindan Doab, and is fairly well irrigated by a rájbaha of the Eastern Jumna Canal. The eastern half belongs to the waterless Hindan-Kali doab, and will be greatly benefited when the Deoband Branch of the Ganges Canal reaches it. Hitherto it has chiefly depended on rain, as water is found at a great depth and well irrigation is difficult. Mr. Colvin thought the pargana generally depressed and disheartened, as the population had been greatly reduced by the mutiny, the drought, and malaria. Cultivation, however, had increased from 39,586 to 44,349 acres, and out of a total area of 51,846 only 7,497 were recorded as culturable waste. The large unirrigated area, 29,176 acres out of 44,349 acres under plough, was the main defect. Mr. Colvin's assessment gave a revenue of Rs. 61,257 against Rs. 65,410, thus involving a decrease of Rs. 4,153. In reporting on the pargana in 1869, Mr. Cadell considered that the tract east of the Hindan, though still waterless, had improved considerably, and that the assessment was "extremely moderate." Of the canal-irrigated tract west of the Hindan he wrote that Mr. Colvin's assessments were needlessly low, and did not represent "the half-asset value of this prosperous and greatly improved tract." The Board, in noticing this criticism, argue with much force that the prosperity with which Mr. Cadell was struck was non-existent when the settlement was revised in 1861. A settlement officer, it has been repeatedly laid down, must take things as he finds them, and frame his proposals accordingly.

22. *Shámli*.—This pargana, like Jhinjhana, to the south of which it lies, is bisected by the Kirsani. It is one of "very unequal fertility." The tract to the east of the stream is hardly reached by the canal, but the industrious Jat communities have covered it with wells. The western half is traversed by the Jumna Canal, and irrigation had extended largely

since the previous settlement. The irrigated area of the whole pargana was returned as 21,000 acres, against 10,000 in Mr. Thornton's day. On the other hand, the cultivated area showed no increase, being 45,455 acres against 45,752 at the last settlement. As the culturable waste including fallows was only 6,200 acres out of a total area of 64,767 acres, little further extension of cultivation was possible. Mr. Colvin's assessments gave a revenue of Rs. 1,20,057 against an expiring demand of Rs. 1,20,316. The decrease was therefore Rs. 259. But as he assessed at half-assets in place of two-thirds, the rental assumed by him was Rs. 2,40,114 against Rs. 1,85,102, which Mr. Thornton's settlement presumed. The 30 per cent. increase in the rental was due to the extension of irrigation and rise in prices. Mr. Cadell in 1869 found little fault with the revision. Of the tract east of the Kirsani he wrote—"the assessment is so full and fair" that, but for the proposed construction of a new canal cut, nearly all the estates might be settled permanently. Of the canal-irrigated tract west of the Kirsani he remarks that "the cultivated area is decreasing owing to the steady inroads of swamp and reh." "The land is slowly but steadily decreasing, and malaria has enfeebled the population." He also notes as an "extraordinary phenomenon" that the well-irrigated estates on the east of the stream pay higher rents than the canal-irrigated ones on the west bank. "It is difficult to overstate the injury which has been caused to the immediate neighbourhood of the canal by the short-sighted policy of deluging lowlying tracts with the sole object of collecting high water rates over a limited area."

23. *Kairána*.—This pargana lies to the west of Shámli and to the south of Bidauli. Its western boundary is the Jumna, and the extensive riverain lands bordering that river are extremely fertile. The northern villages resemble those of Bidauli in poverty and neglect, while the south is naturally fertile and also highly irrigated by the Eastern Jumna Canal. Cultivation in the pargana had increased from 29,116 acres to 33,642, and 24,935 acres of these were irrigated. At the last settlement the entire pargana was unirrigated with the exception of 818 acres. Mr. Colvin's revision raised the revenue from Rs. 49,571 to Rs. 52,307, or by 5 per cent. He considered that the previous assessment had been very light, and that extension of irrigation and cultivation had made it lighter still. His assumed rent-rates would have given an even greater enhancement of revenue had he not intentionally gone below them. He feared lest "a sudden shock to the landlords and change in their means of subsistence would inevitably lead to distress." As the inhabitants were chiefly Gujars, who had but lately been won from indolence and cattle-lifting by the attractions of canal water, his fear was not ill-founded. Mr. Cadell, while corroborating the moderation of the assessment, fully admitted the necessity of it. "It is just the tract," he remarks, "in which of all others the effect of a sudden enhancement of the Government demand was most to be feared."

24. *Kándhla*.—With this pargana Mr. Colvin's work of assessment was completed. It lies to the extreme south-west of the district, and is bounded on the east by Budhána and on the north by Kairána and Shámli. The Eastern Jumna Canal runs through the heart of it, and

canal-irrigation is very general. The pargana is the most prosperous in the district. The cultivated area had increased from 46,599 acres to 50,329, and irrigation from 15,060 acres to 38,806. The population is dense and the villages lie close together. But neither map nor census, wrote Mr. Colvin, "can give an accurate idea of the teeming life, the innumerable wheat fields, the long stretches of cane cultivation, the busy wells, the variety of large tracts of uncultivated land, the prosperous stir of villages and agricultural towns." Mr. Colvin's settlement increased the revenue from Rs. 1,00,759 to Rs. 1,11,410, or by Rs. 10,651. The increase is 10 per cent. But his assumed rental involved an increase of 43 per cent. on the rental assumed in 1841, when two-thirds of the assets were taken. This he ascribed mainly to the great extension of irrigation. Mr. Cadell, after subjecting the assessments to a very careful examination, came to the conclusion that they were on the whole "excellent." "The general cultivation of the tract," he wrote, "is somewhat backward, and even in those estates in which a comparatively high standard has been already reached, so much consideration was shown at settlement—and in order to avoid the evil effects of too sudden a rise the demand was raised so cautiously—that even now there is a large margin for enhancement. This moderation, although here and there it may be excessive, is in no way to be regretted, and the result of it will be a large increase to the capabilities of this tract, and when the period of settlement expires, a suitable addition to the Government demand."

25. *Baghra*.—This, the last of the ten parganas constituting the western half of the district, was assessed by Mr. Martin in 1864. Lying in the waterless Hindan-Kali doab, it ranks in poverty and backwardness with Chartháwal and Thána Bháwan. Mr. Martin speaks of the "sandy, arid soil, the absence of irrigation, the limited supply of manure, the want of capital amongst the malguzars, and the desertion of cultivators." The cultivated area had slightly increased, being 42,038 acres against 39,434 at the last settlement. But less than half of this was irrigated, and the drought of 1860-61 had "so exhausted the zamindars as to make them in many places absolutely helpless." The old demand had been Rs. 86,362; Mr. Martin reduced it to Rs. 81,691. Mr. Cadell, reporting on the pargana in 1870, considered this "considerable fall hardly necessary." But the tract must be looked at as it appeared to Mr. Martin, and his report fully bears out the policy of reducing the demand on landholders so indebted and disheartened as he describes them.

26. The result of revision of settlement in these ten parganas is shown in the appended table :—

Pargana.			Old demand.	New demand at 50 per cent.	Increase.	Decrease.	Old rate on cultivation.	New rate on cultivation.
			Rs.	Rs.	Rs.	Rs.	Rs. a. p.	Rs.
Budhána	...	...	75,017	69,846	...	5,171	2 3 7	1 15 8
Shikárpur	...	...	1,06,059	1,03,301	...	2,751	2 6 7	2 2 1
Bidauli	...	...	37,906	39,125	...	8,780	1 8 5	1 6 8
Thána Bháwan	...	...	56,244	57,081	837	...	1 13 7	2 0 11
Jhunjhara	...	...	63,056	55,698	...	7,358	2 2 1	2 4 3
Chartháwal	...	...	65,410	61,257	...	4,153	1 10 5	1 6 1
Shámli	...	...	1,20,316	1,20,057	...	259	2 10 0	2 10 3
Kairána	...	...	49,571	52,307	2,736	...	1 11 2	1 8 10
Kándhla	...	...	1,00,759	1,11,410	10,651	...	2 4 8	2 3 5
Baghra	...	...	86,362	81,691	...	4,671	2 3 0	1 15 11
Total	...	...	7,60,692	7,41,773	14,224	33,143	2 1 6	1 15 8

Kind Rents

27. Before passing to the tract east of the Kali Nadi, the scene of Mr. Cadell's revision, the general principles on which Messrs. Keene, Martin, and Colvin made their assessments may be briefly noticed. The difficulty which they had to face was the prevalence of kind rents. Wherever kind rents are found the uncertainties surrounding the assessing officer are doubled. He has to work out elaborate tables of the produce of the several kinds of soil, manured and unmanured, irrigated and un-irrigated, loams and clays. He has next to ascertain the landlord's share, and, lastly, he has to turn it into its equivalent in money. In this way he arrives at a rough estimate of the rental of an estate. But the labour is immense and the result open to doubt. Fortunately in Muzaffarnagar the assessing officers found most of this work already done for them. Mr. Thornton, the settlement officer of the former settlement, had taken infinite pains to ascertain the average outturn of each crop on each quality of soil in each circle into which he had subdivided the parganas he assessed. On a price table of average values of produce he spent nearly as much labour. He thus arrived at general cash rents for each class of soil. Messrs. Keene, Martin, and Colvin found that they could not do better than accept his estimates of produce. Mr. Keene considered that prices had risen since 1840, and departed slightly from Mr. Thornton's price table. Mr. Colvin, believing that no rise had taken place, adopted the price table as well as the averages of produce. But all three officers, whenever they could, took Mr. Thornton's circles and deduced soil rents as the basis of their work.

They applied of course many collateral tests. The patwáris' papers showed both the outturn and the estimated value of the landlord's share for each year. From these returns the average rent received by the landlord on each kind of crop was worked out on the average for the five years. Applying these crop rates to the cultivated area of the year of survey, an estimate of the rental could be made. This being based on the patwáris' figures proved generally too low. The village papers, it may be noticed, were considered generally untrustworthy. Another test was to ascertain the average area in a village under each kind of crop, and then apply Mr. Thornton's estimate of outturn.

28. Messrs. Keene and Colvin's assessment reports show the care and discrimination with which they worked, and the general excellence of the result has been admitted by Mr. Cadell. Mr. Cadell, however, has criticised Mr. Colvin's method of dealing with the irrigated area, and as the Board have defended Mr. Colvin's procedure, the point deserves a brief notice. It seems that Mr. Thornton very properly drew a distinction between the irrigable land of a village and the land actually irrigated in any one year. In framing his estimates of yield he took a mean between the produce of the actually irrigated area and the produce of the irrigable but dry area. The rent-rate thus arrived at was, therefore, somewhat lower than the actually irrigated land alone would have given. He applied it to the whole irrigable area. Mr. Colvin, too, saw the necessity of taking into account the *irrigable* as well as the actually irrigated area. But he did so indirectly rather than directly. He assessed to wet rates the irrigated area alone, but whenever he found the irrigable

but dry area considerable, he added something to the assessment of the village. As his wet rates were based on Mr. Thornton's, and as Mr. Thornton's were admittedly mean rates, Mr. Cadell contends that Mr. Colvin should have applied them to the whole irrigable area. Theoretically Mr. Cadell appears to be right, but practically the allowance for the dry irrigable lands which Mr. Colvin made came to the same thing.

29. The settlement of the tract east of the Kali Nadi, which forms the subject of Mr. Cadell's report, has now to be noticed. Five of the six parganas had, along with the western tract, been assessed in 1841 by Mr. Thornton. His assessment, which was calculated at 65 per cent. of the gross assets, is thought by Mr. Cadell to have been somewhat light. But Mr. Cadell bears full testimony to the excellence of that distinguished officer's work. The sixth pargana, Bhúma Sambalhera, was assessed as part of the then Meerut district by Sir H. Elliott, and the severity of the revenue imposed by him was denoted by extensive transfers. It is unnecessary to follow Mr. Cadell through the minute criticisms to which he subjects the methods of his predecessors. The general conclusion is that, with the exception of Bhúma Sambalhera, the tract "enjoyed twenty years of moderate assessments." The precarious character of much of the cultivation and the absence of irrigation naturally inclined Mr. Thornton to leniency. Out of over 220,000 cultivated acres not one in ten was irrigated. In the northern parganas the depth of the water-level practically prohibited wells: to the south, in Jansath and Khatauli, irrigation was more frequent, but the wells represented a large expenditure of capital on the part of the frugal Jat and Taga brotherhoods. But the opening of the Ganges Canal in 1854 entirely changed the face of the country, and converted Mr. Thornton's settlement from a moderate to a very light one. In 1861, when Mr. Martin was directed to revise it, the irrigated area had increased from 21,633 acres to 119,440 acres—the cultivated area showed an increase of 28,000 acres. The revenue assessed by Mr. Thornton had been Rs. 3,23,962. Assuming this to have represented two-thirds of the assets, the rental in 1841 must have been about Rs. 4,85,943. If irrigation be assumed to increase the average letting value of land by Rs. 2 an acre, a sufficiently moderate estimate, and a similar rent be placed upon the area added to the cultivation since 1841, the rental of 1861 might have reasonably been supposed to have augmented through irrigation and increased cultivation by a sum of Rs. 2,52,700. Mr. Martin would thus have been justified in assessing on a rental of at least Rs. 7,38,000, which would have given a revenue at half rates of Rs. 3,69,000. Had he, further, taken into account the upward movement of rents and the rise of prices, he would have arrived at a still closer approximation to the truth. As it was, his revision gave a revenue of only Rs. 3,46,908, or an increase of less than quarter of a lakh on the sum which an officer as leniently disposed as Mr. Thornton had not scrupled to impose twenty years earlier on the same tract before the canal or the railway had been thought of. With this result the Government was not unreasonably dissatisfied. The subject became the more important when the question of confirming this and other settlements in perpetuity came to be discussed. "The question is," wrote the Lieutenant-Governor in a

minute dated 26th May, 1868, "whether such a settlement can be confirmed at all. And I do not hesitate to say that it cannot. It would be unfair to the exchequer and unjust to the rest of India, which expects that every district shall bear its fair assessment of land revenue, and what—if this settlement were confirmed—was lost here would virtually be thrown as a burden upon the people themselves." In 1870 a conference was held at Meerut by the Lieutenant-Governor. "The opinion of all present was unanimous, that the assessment on these six parganas is inadequate, and that the inadequacy existed at the time when the assessment was framed; that consequently there should be a revision of the Government demand, preceded by a testing and correction of the entries of soil and irrigation. In this opinion the Lieutenant-Governor concurs.

* * * Mr. Cadell has supported his conclusions in every pargana by illustrations of specific estates in which the actual assets are disproportionately in excess of the revenue assessed on them. The evidence from these statements appears to the Lieutenant-Governor to prove conclusively that the assessment was originally inadequate and should now be disallowed. * * * * * The new assessments will be based on existing assets, and will run, as proposed by Mr. Inglis, for the same period as the present settlement, so as to expire at the same time with it" (*Resolution No. 118B., dated 25th March, 1870.*)

30. The above extracts will sufficiently indicate the reasons which seemed to render the revision of Mr. Martin's settlement unavoidable. Mr. Cadell's assessment gives a revenue of Rs. 4,41,093, which exceeds by Rs. 94,185 Mr. Martin's and by Rs. 1,17,131 Mr. Thornton's settlement. The extent to which Mr. Cadell enhanced the demand in the several parganas is shown in the annexed table:—

				(1) Mr. Thornton's assessment (1841).	(2) Mr. Martin's (1861).	(3) Mr. Cadell's (1871).	Increase of (3) over (2).
				Rs.	Rs.	Rs.	Rs.
Pûrchapar	...	...	...	56,803	59,264	69,550	17 per cent.
Muzaffarnagar	...	...	...	59,849	71,683	82,160	14 "
Bhûkarheri	...	...	...	47,001	55,946	74,311	32 "
Jauli Jansath	...	...	...	56,418	58,495	81,110	38 "
Khatâuli	...	...	...	68,171	65,829	88,106	33 "
Bhûma Sambalhera	...	...	...	35,715	35,691	45,856	28 "
Total	...	...	...	3,23,962	3,46,908	4,41,093	27 per cent.

As the errors discovered in Mr. Martin's settlement arose chiefly from defective statistics of soils, crops, and irrigation, which had been compiled by an untrained and badly supervised subordinate staff, Mr. Cadell's first duty was to revise the maps and the settlement record of each village. The work proved more extensive than had been anticipated. Many maps had been so incorrectly prepared that they had to be redrawn after a resurvey. Even where they had originally been accurate, they were found in 1870 to have become virtually obsolete. The khasras inspired equally little confidence, and every entry had to be tested before accurate rent-rolls and soil areas could be prepared. Mr. Cadell is silent as to the capacity of the patwâris of the district, but it is clear that, here as elsewhere, the most accurate settlement record would have been allowed by neglect and supineness to have become obsolete in a very few

years. One of the merits which Mr. Cadell justly claims for his work of revision is that it has substituted a correct for an incorrect record. But were the patwári system on the same footing that it was in 1870, there is great reason to suppose that all this labour and expense would have been absolutely thrown away. Under the present arrangements for the better supervision of patwáris there is now a reasonable chance that the settlement maps and records will be kept up to date, and enable a subsequent revision of the revenue to be made with comparative ease.

31. In classifying the soils Mr. Cadell departed in one important respect from his predecessors. In the settlement of 1841 not only had manured land been distinguished from non-manured, but a third class, comprising land which occasionally received manure, had been recognised. In the centrally situated districts of the Gangetic doab these three classes of land usually form three concentric circles round the village site, and it is rare for the outermost circle to receive any manure at all. This well-known fact has enabled the assessing officer to frame varying rates of rent for his home, middle, and outlying lands, and the manure circle is the basis of his system. In Muzaffarnagar, however, the large extent of cane cultivation rendered such a classification impossible. The cane crop "wanders over the whole irrigable area" of a village, and the available manure of the cultivator goes to his cane field. In this way nearly every acre in rotation receives its share of manure, and classification of soils into manured and unmanured becomes impossible. Mr. Cadell, therefore, abandoned the attempt to secure an accurate entry of manured land, though in each village its general extent appears to have been noted for the assessing officer's guidance.

The soils were thus classified according to their natural qualities. Loams fell under the heads of first and second class *rausli*, the more sandy soils appearing as *bhúr*. The irrigated area was carefully recorded, and this introduced subdivisions of irrigated and unirrigated lands. Estates were further grouped into three classes of best, average, and inferior estates, with the view that each class should present tolerably homogeneous features. The classification completed, Mr. Cadell proceeded to educe a rent-rate for each variety of soil in each circle from the rents ascertained to be paid upon them. In arriving at his rates he followed the usual practice of eliminating from the rent-rolls all rents which obviously were abnormally low or high. The table on page 83 of the report exhibits the average rates of rent thus ascertained and the rates finally assumed for the purpose of assessment. For first-class irrigated loam the rate varied from Rs. 6 an acre in estates of the first class to Rs. 4-8-0 in those of the third. For dry *bhúr*, the poorest description of soil, the rate was from Rs. 2 in first-class estates to 12 annas in those of the third. It is unnecessary to enter into further details, as they are fully given in the body of the report. The revenue was assessed at half the rental obtained by applying these rent-rates, and the incidence of the revenue on the cultivated area of each pargana is shown in the margin.

	Rs. a. p.		Rs. a. p.
Púrchepar	... 1 10 3	Jauli Jansath	... 1 9 0
Muzaffarnagar	... 1 13 0	Khatáuli	... 2 1 10
Bhúkarheri	... 1 9 8	Bhúma Sambalhera	... 1 4 0

Centrally
situated
villages in
G. Doab

32. That Mr. Cadell's assessment is a moderate one appears from several considerations. The revenue imposed by him exceeds Mr. Thornton's demand by Rs. 1,17,131, or 34 per cent. But in the interval between 1841 and 1871 the cultivated area had increased by 19 per cent., while the irrigated area had more than quadrupled. The immense change effected by the canal is well brought out in the comparative statement given on page 70 of the report. In 1841 irrigation was confined to 21,633 acres, of which 19,000 lay in the two southern parganas of Jansath and Khatáuli. In the whole pargana of Púrchapar all but 53 acres were waterless; and Bhúkarheri and Bhúma Sambalhera were nearly as badly off. The sandy character of the soil intensified the evil, and it is no exaggeration to say that the northern parganas were always exposed to the dire effects of drought. In 1871 the irrigable area was returned at 122,632 acres, of which 113,694 acres depended on the canal, 7,939 on wells, and 949 on ponds and tanks. In the famine year of 1868 the canal supplied water to 128,000 acres, so that half the area ordinarily under cultivation is now placed beyond the reach of drought. In Púrchapar alone 24,853 acres in that disastrous year received canal water, which thirty years before on a similar failure of the rains would have been absolutely sterile. The agricultural wealth which in 1868 alone the canal created in the district may be inferred from these figures.

33. Apart from the stability thus given to agriculture since 1841, the canal has largely extended the area under high-class crops. The amount of land under cane and cotton has been doubled, that under wheat and garden crops considerably increased, and a species of fine rice known as *munji*, which was then unknown in the district, is now extensively grown. The area under cane is now $6\frac{1}{2}$ per cent. of the total cultivation of the six parganas, and in the rich pargana of Khatáuli one acre in every ten is now under this profitable crop. In an interesting paragraph Mr. Cadell shows that in this pargana alone the substitution of canal for well water over some 7,000 acres has set free bullock power sufficient for a single ploughing of 31,000 acres of land (page 70), and it may be reasonably conjectured that to this accession to the capital at the agriculturist's command the extension of the area under sugarcane may be chiefly assigned.

34. These considerations show that a considerable increase on the assessments of 1841 was in simple justice to the State required at Mr. Cadell's settlement. But even stronger evidence is supplied by actual rental of the tract. The revenue assessed by him is Rs. 4,41,093, which assumes a rental of Rs. 8,82,186. In 1868 the rental returned by the patwáris was Rs. 8,65,040: this in 1873 had risen to Rs. 9,34,326, and it is no doubt to-day considerably higher. It appears that at the time of Mr. Martin's settlement the rents were mainly paid either in kind or on the crop (*zabti*), but in the years immediately succeeding his revision they were extensively commuted to cash rents. The result was that between 1863 and 1868 the rental rose from Rs. 6,67,000 to over 8½ lakhs. Instances were discovered by Mr. Cadell of rentals three and four times greater than the revenue assessed in 1861. In one village the recorded rental was Rs. 4,000, and the revenue Rs. 1,300: in another, of which

the revenue was Rs. 1,900, the rent-roll, according to the lowest calculation, was not less than Rs. 6,000 or Rs. 7,000.

35. The latter portion of Mr. Cadell's report deals with the preparation of the record-of-rights, the disposal of enhancement cases, and other subsidiary matters. The method in which enhancement suits were dealt with is described at page 113, and great care appears to have been taken to adjust them by amicable agreement between the parties. Equal labour was expended in recording the respective rights and privileges of landlords and tenants as admitted by them. The right of occupancy-tenants to plant trees on their holdings, though not formally secured by law, is often conceded by landlords in districts where tenant-right is strong, and this has particularly been the case in Muzaffarnagar. The tenantry there are frequently descendants of the former owners of the land, and the efforts made by Mr. Cadell to obtain the recognition of their legitimate rights in this and other points cannot be too highly commended. It is satisfactory to find that in this difficult matter he managed generally to carry both parties along with him.

36. The lengthy digression on the principles of canal management in which Mr. Cadell has indulged is somewhat out of place in a settlement report, but the question is so important, and forms so prominent a feature in the revenue administration of the district, that it can hardly be passed unnoticed. Briefly, Mr. Cadell shows that in the alignment of the main arteries and of the distributaries of both the Ganges and Jumna Canals serious mistakes were made, which materially detract from the utility of these noble works. Water has been taken to tracts already sufficiently protected by wells, whilst often the poorest and driest tracts have been avoided. The economy in labour which results from the substitution of canal for well water has been already noticed, but the gain is even greater where the canal is taken into unirrigated land. Nor can the damage which excessive canal-irrigation causes to lowlying estates with an already moist soil be overlooked. It is, however, only due to the canal authorities to say that at the present day they are as fully alive as Mr. Cadell to the evils of which he complains, and the mistakes of the early days of canal construction are not likely to be repeated. The maxim is now generally admitted that it is better to irrigate a limited area in many villages than a large area in few, and to supplement rather than supersede irrigation by wells. That drainage should go hand in hand with canal extension is an accepted principle, and in Muzaffarnagar itself many of the waterlogged estates which are mentioned by Messrs. Keene, Colvin, and Cadell have been thoroughly drained and reclaimed by the Canal Department. On the subject of occupiers' and owners' rates Mr. Cadell's views are in general accord with those now accepted by the administration. Experience has shown that too low a price was put on canal water in the early years of the canals, and by the growth of rents a great portion of the profit, which higher water-rates would have secured to the State, has been intercepted by the landlords. Of this fact the rapid rise in the rental of the Muzaffarnagar district between the years 1861-1871 is a striking proof. The revision of the land revenue assessments has enabled the Government to share in the gains of the landholding

classes, though not to the extent to which it is strictly entitled, or which it might have obtained had the rise of rents been prevented by the imposition of higher water rates. This principle has been recognised on the more recent Agra Canal, and a further improvement has been made in assessing the owners' rate in those districts irrigated by it which have lately come under re-settlement.

37. Mention has already been made (para. 7) of pargana Gordhanpur, lying to the extreme north-east of the district between the Ganges Canal and the Ganges river, which has been excluded from a regular settlement. In an appendix to his report Mr. Cadell deals with the history of this swamped tract and the causes of its deterioration. In a measure the mischief may probably be augmented by the percolation of canal water from the higher levels, but the immediate cause was unquestionably the diversion of the Solani river from its old channel into the line of marshes which have always existed in the pargana. A considerable expenditure has from time to time been incurred on drainage works, more in fact than the small amount of revenue at stake might seem to justify. But the work of reclamation has not been very successful, and for the present the only plan is to continue to settle the thirty-six estates in question on triennial leases, as ordered by G. O. No. 720A., date 1st May, 1877: they are unsuited to any system of fixed assessment for a longer term of years. The revenue derived from them amounts to the comparatively insignificant sum of Rs. 5,000 or Rs. 6,000 a year.

38. To return to the settlement of the district as a whole. The several matters connected with these disconnected and protracted operations have been sufficiently noticed, and the sole point which remains for consideration is the term for which the settlement should be sanctioned. The western half of the district came under re-settlement in 1861, and if the ordinary term of thirty years be thought applicable, the present settlement will expire in 1891. The assessments may be somewhat light, but considering the long duration of settlement operations in the district, Sir George Couper would confirm them until 1891. For the reasons stated in para. 17 he would extend the same term to the backward pargana of Bidauli. In regard to the eastern half, which came under Mr. Cadell's revision, His Honor would similarly confirm the revised assessments until 1891. There are obvious advantages in placing a district under the same period of settlement, and though Mr. Cadell's assessments may possibly not require much revision ten years hence, it might be found desirable to place the portion of the revenue due to canal-irrigation on a different basis. His Honor the Lieutenant-Governor would, therefore, request the Government of India to sanction the above proposals.

39. The financial result of the settlement has been a loss of Rs. 18,919 on the western half of the district, and a gain of Rs. 1,17,131 on the eastern side, giving a net gain of about one lakh. The cost of the settlement, as a whole, cannot be accurately stated, as complete details are wanting of the expenditure in the years preceding Mr. Cadell's deputation to the district in 1870. The cost of his revision alone was Rs. 1,56,972, and the sums expended during the ten preceding years must have been

considerable. Still more considerable must have been the indirect cost of the settlement from first to last to the district. The revision of 1870, it has been shown, was forced upon the Government, but the evils attending such a measure must be fully recognised. That it was extremely irksome to and unpopular among the people, and unsatisfactory to the revising officer, as Mr. Cadell himself admits, cannot be doubted, and it was made worse by the utter confusion into which the maps and village records had been allowed to fall. In considering the settlements effected during the last twenty years in Bijnor and some other districts, Sir George Couper has had reason to comment on the interminable length of the proceedings, and to express an earnest hope that any future revision of the settlements will be conducted on more accurate data and in a more expeditious manner. His Honor is glad to see that the same view has been taken by the Supreme Government in its recent Resolution on settlements. The obvious remedy, as is pointed out in the orders referred to, is the accurate maintenance of the settlement record through the agency of the patwáris and the kanúngo, and Sir George Couper is happy to think that this is now more feasible than it has been hitherto. If this end alone is accomplished by the Agricultural Department of the province, it will amply justify its existence and fully recoup the State for any sums expended on its organisation. In the Muzaffarnagar district Mr. Cadell has left an excellent record-of-rights, and there is no reason why with due care it should not furnish a sufficient basis for assessment on the revision of the present settlement.

C. ROBERTSON,

Secy. to Govt., N.-W. P. and Oudh.

ORDER.—Ordered, that a copy of this Resolution be forwarded to the Secretary, Board of Revenue, North-Western Provinces, for the information of the Senior Member, with reference to his letters Nos. 1325A. and $\frac{219}{1-99}$, dated respectively the 12th December, 1873 and 28th April, 1881.

Ordered, also, that a copy of this Resolution and of the reports be forwarded to the Secretary to Government of India, Revenue and Agricultural Department, with the recommendation that the settlement of the district now reported be confirmed for thirty years.

By order, &c.,

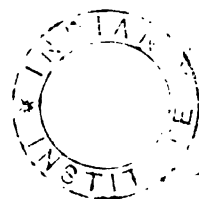
C. ROBERTSON,

Secy. to Govt., N.-W. P. and Oudh.

Extract from a letter from E. C. BUCK, Esq., C.S., Secretary to the Government of India, Revenue and Agricultural Department (Revenue), to the Secretary to Government of the North-Western Provinces and Oudh, No. 166R., dated Simla, the 24th April, 1882.

* * * * *

* The Governor-General in Council sanctions the recommendation of the Local Government, that the settlement should be confirmed up to 1891, for the entire district, with the exception of the swamped estates in parganas Gordhanpur, which are understood to be under annual settlement.



10314
115

Shant Nagri

Original population of Jats, Jains,
dolls, and other
Wardha village, -
In 2nd year, an area of 100
acres was taken for
an estate in 1870 and
the population of the village

9-11/24

Original population of
the village of 100

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